RADIO TEST REPORT-LTE
47 CFR FCC Part 2&22&24&27

Client Information:

Applicant:	ZTE Corporation
Applicant add.:	ZTE Plaza, #55 Keji Road South, Hi-Tech, Industrial Park, Nanshan District,Shenzhen, Guangdong, 518057, P.R.China

Product Information:

Product Name:	Tablet PC
Model No.:	ZTE T1002
Serial Model:	ZTE Blade X10
Brand Name:	ZTE
FCC ID:	SRQ-ZTET1002

Prepared By:

Dongguan Yaxu (AiT) Technology Limited

No.22, Jinqianling Third Street, Jitigang, Huangjiang,Dongguan, Guangdong, China

Tel.: +86-769-8202 0499 Fax.: +86-769-8202 0495

Date of Receipt:	July 13, 2022	Date of Test:	Sep. 04~ Sep. 14, 2022
Date of Issue:	Sep. 16, 2022	Test Result:	Pass

This device has been tested and found to comply with the stated standard(s), which is (are) required by FCC rules and indicated in the test report and are applicable only to the tested sample identified in the report.

Reviewed by: Simba Huang Simba Huang **Approved by:** Seal.chen Seal.chen

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1.SUMMARY OF TEST

1.1TEST FACILITY

The test facility is recognized, certified or accredited by the following organizations:

CNAS- Registration No: L6177

Dongguan Yaxu (AiT) technology Limited is accredited to ISO/IEC 17025:2017 general Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the competence of testing and calibration laboratories) on Aug.04, 2020

FCC-Registration No.: 703111 Designation Number: CN1313

Dongguan Yaxu (AiT) technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC —Registration No.: 6819A CAB identifier: CN0122

The 3m Semi-anechoic chamber of DongguanYaxu (AiT) technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 6819A

A2LA-Lab Cert. No.: 6317.01

Dongguan Yaxu (AiT) technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.2MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ±U** · where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2** · providing a level of confidence of approximately **95** %.

No.	Item	Uncertainty
1	Conducted Emission Test	±1.38dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.68dB
5	All emissions,radiated(>1G)	±4.89dB
6	Temperature	±0.5°C
7	Humidity	±2%

2.GENERAL INFORMATION

2.1GENERAL DESCRIPTION OF EUTD

ProductName	Tablet PC
Trade Name	ZTE
Model Name	ZTE T1002
Series Model	ZTE Blade X10
Test sample(s) ID:	22071302-2
Model Difference	PCB board, structure and internal of these model(s) are the same
Tx Frequency:	GSM/GPRS/EDGE: 850: 824 MHz ~ 849MHz 1900: 1850 MHz ~ 1910MHz WCDMA: Band V: 824 MHz ~ 849 MHz Band IV: 1710 MHz ~ 1755 MHz Band II: 1850 MHz ~ 1910 MHz
Modulation Characteristics:	GMSK for GSM/GPRS; GMSK and 8PSK for EDGE WCDMA: QPSK; HSDPA:QPSK/16QAM; HSUPA:BPSK
SIM Card:	SIM 1 and SIM 2 is a chipset unit and tested as single chipset, SIM 1 is used to tested.
Antenna:	FPC
Antenna gain:	GSM 850: 0.65dBi , PCS 1900:1.21dBi WCDMA 850: 0.65dBi, WCDMA1900: 1.21dBi, WCDMA 1700: 1.12dBi
Battery:	Rated Voltage:3.8V Charge Limit Voltage:4.2V Capacity: 6000mAh
Adapter:	Model:AS1201A-0502000USU INPUT: 100-240V~ 50/60Hz 0.35A, Output: 5V2A
GPRS/EDGE Class:	Multi-Class12
Hardware version number:	V2.3
Software version number:	N/A
Extreme Temp. Tolerance:	-30℃ to +50℃

2.2 LIST OF TEST EQUIPMENTS

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	Spectrum Analyzer	R&S	FSV40	101470	2022.09.02	2023.09.01
2	EMI Measuring Receiver	R&S	ESR	101160	2022.09.02	2023.09.01
3	Low Noise Pre Amplifier	HP	HP8447E	AiT-F01319	2022.09.02	2023.09.01
4	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2022.09.02	2023.09.01
5	Passive Loop	ETS	6512	00165355	2022.09.04	2022.09.03
6	TRILOG Super Broadband test Antenna	SCHWARZBECK	VULB9160	9160-3206	2021.08.28	2024.08.27
7	Broadband Horn Antenna	SCHWARZBECK	BBHA9120D	452	2021.08.28	2024.08.27
8	SHF-EHF Horn Antenna 15-40GHz	SCHWARZBECK	BBHA9170	BBHA9170367d	2020.11.24	2023.11.23
9	EMI Test Receiver	R&S	ESCI	100124	2022.09.02	2023.09.01
10	LISN	Kyoritsu	KNW-242	8-837-4	2022.09.02	2023.09.01
11	LISN	R&S	ESH3-Z2	0357.8810.54-101161-S2	2022.09.02	2023.09.01
12	Pro.Temp&Humi.chamber	MENTEK	MHP-150-1C	MAA08112501	2022.09.02	2023.09.01
13	RF Automatic Test system	MW	MW100-RFCB	21033016	2022.09.02	2023.09.01
14	Wideband Radio communication tester	R&S	CMW500	1201.0002K50	2022.09.02	2023.09.01
15	DC power supply	ZHAOXIN	RXN-305D-2	28070002559	N/A	N/A
16	temporary antenna connector(Note)	NTS	R001	N/A	N/A	N/A
Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.						

2.3TEST CONFIGURATION OF EQUIPMENT UNDER TEST

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 and ANSI C63.262015 PowerMeas. License Digital Systems with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to

find the maximum emission.

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 10th harmonic for GSM850 and WCDMA Band V.

2. 30 MHz to 10th harmonic for GSM1900 and WCDMA Band II.

3. 30 MHz to 10th harmonic for WCDMA Band IV

All modes and data rates and positions were investigated.

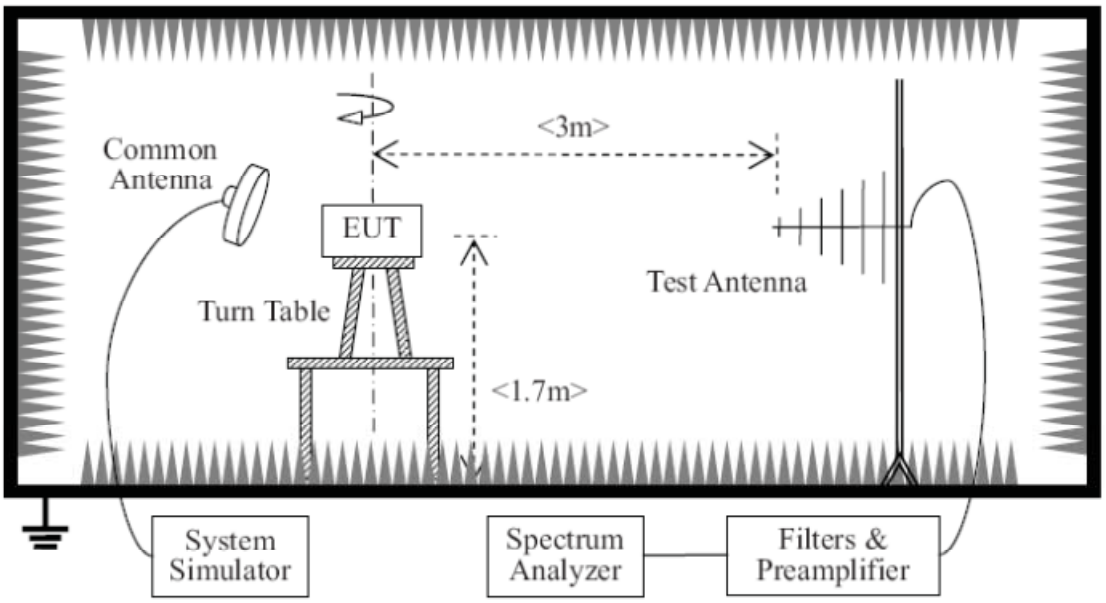
Test modes are chosen to be reported as the worst case configuration below:

	TEST MODES	
BAND	RADIATED TCS	CONDUCTED TCS
GSM 850	GSM LINK GPRS/EDGE CLASS 12 LINK	GSM LINK GPRS/EDGE CLASS 12 LINK
GSM 1900	GSM LINK GPRS/EDGE CLASS 12 LINK	GSM LINK GPRS/EDGE CLASS 12 LINK
WCDMA BAND V	RMC 12.2KBPS LINK	RMC 12.2KBPS LINK
WCDMA BAND II	RMC 12.2KBPS LINK	RMC 12.2KBPS LINK
WCDMA BAND IV	RMC 12.2KBPS LINK	RMC 12.2KBPS LINK

RF Function	Band	Mode	Modulation	Power Class	Ant Gain(dBi)	Ant Type	SIM Card
GSM	850	GSM	GMSK	4(power control level 5)	0.65	FPC	2 SIM 1 is used to tested.
		GPRS (Class12)	GMSK	4			
		EDGE(Class12)	GMSK, 8PSK	E2			
	1900	GSM	GMSK	1(power control level 0)	1.21		
		GPRS (Class12)	GMSK	1			
		EDGE(Class12)	GMSK, 8PSK	E2			
WCDMA	2/5/4	WCDMA	QPSK	3	WCDMA 850: 0.65dBi, WCDMA 1900: 1.21dBi, WCDMA 1700: 1.12dBi	FPC	2 SIM 1 is used to tested.
		HSDPA	QPSK, 16QAM				
		HSUPA	BPSK				

2.4 TEST SETUP

1. Radiated Spurious Emission Test Setup



The EUT, which is powered by USB 5V, is located in a 3m Full-Anechoic Chamber; the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading.

A call is established between the EUT and the SS via a Common Antenna. The EUT is commanded by the SS to operate at the maximum and minimum output power (i.e. LTE FDD band Power Control Level = 3), and only the test result of the maximum output power was recorded.

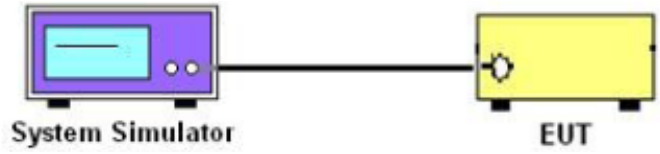
3. CONDUCTED OUTPUT POWER

3.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

3.1.1 MEASUREMENT METHOD

A system simulator was used to establish communication with the eut. Its parameters were set toforce the eut transmitting at maximum output power. The measured power in the radio frequency onthe transmitter output terminals shall be reported.
Configuration follows KDB 971168 D01 v03r01.

3.1.2 TEST SETUP



3.1.3 TEST PROCEDURES

1. The transmitter output port was connected to system simulator.

2. Set EUT at maximum power through the system simulator.

3. Select lowest/middle/highest channels for each band and different modulation.

4. Measure and record the power level from the system simulator.

Note: ERP or EIRP = $P_{Meas} + G_T$
WhereERP or EIRP: effective radiated power or equivalent isotropically radiated power, respectively (expressed in the same units as P_{Meas}, e.g. dBm)
P_{Meas}: measured transmitter output power, in dBm
G_T: gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

3.1.4 TEST RESULTS

GSM 850:

	GSM 850				
Mode	Frequency (MHz)	AVG Power (dBm)	Gain (dBi)	ERP (dBm)	ERP limitdBm)
GSM (GMSK,1-Slot)	824.2	28.01	0.65	26.51	38.45
	836.6	28.19	0.65	26.69	38.45
	848.8	28.07	0.65	26.57	38.45
GPRS (GMSK,1-Slot)	824.2	27.88	0.65	26.38	38.45
	836.6	28.05	0.65	26.55	38.45
	848.8	27.90	0.65	26.40	38.45
GPRS (GMSK,2-Slot)	824.2	26.39	0.65	24.89	38.45
	836.6	26.34	0.65	24.84	38.45
	848.8	26.25	0.65	24.75	38.45
GPRS (GMSK,3-Slot)	824.2	24.52	0.65	23.02	38.45
	836.6	24.70	0.65	23.20	38.45
	848.8	24.57	0.65	23.07	38.45
GPRS (GMSK,4-Slot)	824.2	22.38	0.65	20.88	38.45
	836.6	22.52	0.65	21.02	38.45
	848.8	22.39	0.65	20.89	38.45
EGPRS (8PSK,1-Slot)	824.2	22.31	0.65	20.81	38.45
	836.6	22.45	0.65	20.95	38.45
	848.8	22.41	0.65	20.91	38.45
EGPRS (8PSK,2-Slot)	824.2	20.26	0.65	18.76	38.45
	836.6	20.38	0.65	18.88	38.45
	848.8	20.34	0.65	18.84	38.45
EGPRS (8PSK,3-Slot)	824.2	18.58	0.65	17.08	38.45
	836.6	18.61	0.65	17.11	38.45
	848.8	18.48	0.65	16.98	38.45
EGPRS (8PSK,4-Slot)	824.2	15.86	0.65	14.36	38.45
	836.6	16.12	0.65	14.62	38.45
	848.8	15.92	0.65	14.42	38.45

PCS 1900:

PCS 1900					
Mode	Frequency (MHz)	AVG Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limitdBm)
GSM (GMSK,1-Slot)	1850.2	23.70	1.21	24.91	33.01
	1880.0	23.85	1.21	25.06	33.01
	1909.8	23.76	1.21	24.97	33.01
GPRS (GMSK,1-Slot)	1850.2	23.55	1.21	24.76	33.01
	1880.0	23.74	1.21	24.95	33.01
	1909.8	23.67	1.21	24.88	33.01
GPRS (GMSK,2-Slot)	1850.2	21.45	1.21	22.66	33.01
	1880.0	21.76	1.21	22.97	33.01
	1909.8	21.57	1.21	22.78	33.01
GPRS (GMSK,3-Slot)	1850.2	19.90	1.21	21.11	33.01
	1880.0	19.86	1.21	21.07	33.01
	1909.8	19.89	1.21	21.10	33.01
GPRS (GMSK,4-Slot)	1850.2	17.96	1.21	19.17	33.01
	1880.0	18.08	1.21	19.29	33.01
	1909.8	18.03	1.21	19.24	33.01
EGPRS (8PSK,1-Slot)	1850.2	20.12	1.21	21.33	33.01
	1880.0	20.14	1.21	21.35	33.01
	1909.8	19.87	1.21	21.08	33.01
EGPRS (8PSK,2-Slot)	1850.2	18.53	1.21	19.74	33.01
	1880.0	18.97	1.21	20.18	33.01
	1909.8	18.83	1.21	20.04	33.01
EGPRS (8PSK,3-Slot)	1850.2	16.45	1.21	17.66	33.01
	1880.0	16.54	1.21	17.75	33.01
	1909.8	16.50	1.21	17.71	33.01
EGPRS (8PSK,4-Slot)	1850.2	15.07	1.21	16.28	33.01
	1880.0	15.05	1.21	16.26	33.01
	1909.8	15.18	1.21	16.39	33.01

UMTS BAND V

UMTS BAND 5					
Mode	Frequency(MHz)	AVG Power (dBm)	Gain (dBi)	ERP (dBm)	ERP limitdBm)
WCDMA 850 RMC	826.4	16.86	0.65	15.36	38.45
	836.6	16.56	0.65	15.06	38.45
	846.6	16.65	0.65	15.15	38.45
HSDPA Subtest 1	826.4	16.17	0.65	14.67	38.45
	836.6	16.06	0.65	14.56	38.45
	846.6	15.99	0.65	14.49	38.45
HSDPA Subtest 2	826.4	15.59	0.65	14.09	38.45
	836.6	15.49	0.65	13.99	38.45
	846.6	15.69	0.65	14.19	38.45
HSDPA Subtest 3	826.4	15.44	0.65	13.94	38.45
	836.6	15.26	0.65	13.76	38.45
	846.6	15.39	0.65	13.89	38.45
HSDPA Subtest 4	826.4	15.38	0.65	13.88	38.45
	836.6	15.65	0.65	14.15	38.45
	846.6	15.50	0.65	14.00	38.45
DC-HSDPA Subtest-1	826.4	16.04	0.65	14.54	38.45
	836.6	15.81	0.65	14.31	38.45
	846.6	16.12	0.65	14.62	38.45
DC-HSDPA Subtest-2	826.4	15.00	0.65	13.50	38.45
	836.6	15.25	0.65	13.75	38.45
	846.6	15.12	0.65	13.62	38.45
DC-HSDPA Subtest-3	826.4	15.44	0.65	13.94	38.45
	836.6	15.47	0.65	13.97	38.45
	846.6	15.19	0.65	13.69	38.45
DC-HSDPA Subtest-4	826.4	15.49	0.65	13.99	38.45
	836.6	15.87	0.65	14.37	38.45
	846.6	15.80	0.65	14.30	38.45
HSUPA Subtest 1	826.4	15.79	0.65	14.29	38.45
	836.6	15.83	0.65	14.33	38.45
	846.6	16.25	0.65	14.75	38.45
HSUPA Subtest 2	826.4	14.30	0.65	12.80	38.45
	836.6	14.30	0.65	12.80	38.45
	846.6	14.44	0.65	12.94	38.45
HSUPA Subtest 3	826.4	15.06	0.65	13.56	38.45
	836.6	14.64	0.65	13.14	38.45
	846.6	15.13	0.65	13.63	38.45
HSUPA Subtest 4	826.4	14.37	0.65	12.87	38.45
	836.6	14.32	0.65	12.82	38.45
	846.6	13.94	0.65	12.44	38.45
HSUPA Subtest 5	826.4	15.66	0.65	14.16	38.45
	836.6	16.14	0.65	14.64	38.45
	846.6	15.74	0.65	14.24	38.45
HSPA+ (16QAM) Subtest-1	826.4	13.95	0.65	12.45	38.45
	836.6	14.21	0.65	12.71	38.45
	846.6	13.64	0.65	12.14	38.45

UMTS BAND II

UMTS BAND 2					
Mode	Frequency(MHz)	AVG Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limitdBm)
WCDMA 1900 RMC	1852.4	13.38	1.21	14.59	33.01
	1880	13.26	1.21	14.47	33.01
	1907.6	13.31	1.21	14.52	33.01
HSDPA Subtest 1	1852.4	13.00	1.21	14.21	33.01
	1880	12.86	1.21	14.07	33.01
	1907.6	12.37	1.21	13.58	33.01
HSDPA Subtest 2	1852.4	13.01	1.21	14.22	33.01
	1880	12.78	1.21	13.99	33.01
	1907.6	12.39	1.21	13.60	33.01
HSDPA Subtest 3	1852.4	11.99	1.21	13.20	33.01
	1880	11.94	1.21	13.15	33.01
	1907.6	12.09	1.21	13.30	33.01
HSDPA Subtest 4	1852.4	11.36	1.21	12.57	33.01
	1880	11.41	1.21	12.62	33.01
	1907.6	10.33	1.21	11.54	33.01
DC-HSDPA Subtest-1	1852.4	12.97	1.21	14.18	33.01
	1880	13.15	1.21	14.36	33.01
	1907.6	12.75	1.21	13.96	33.01
DC-HSDPA Subtest-2	1852.4	12.50	1.21	13.71	33.01
	1880	12.83	1.21	14.04	33.01
	1907.6	12.25	1.21	13.46	33.01
DC-HSDPA Subtest-3	1852.4	11.30	1.21	12.51	33.01
	1880	11.38	1.21	12.59	33.01
	1907.6	10.63	1.21	11.84	33.01
DC-HSDPA Subtest-4	1852.4	11.90	1.21	13.11	33.01
	1880	12.06	1.21	13.27	33.01
	1907.6	10.81	1.21	12.02	33.01
HSUPA Subtest 1	1852.4	13.10	1.21	14.31	33.01
	1880	13.03	1.21	14.24	33.01
	1907.6	12.53	1.21	13.74	33.01
HSUPA Subtest 2	1852.4	11.09	1.21	12.30	33.01
	1880	11.08	1.21	12.29	33.01
	1907.6	11.13	1.21	12.34	33.01
HSUPA Subtest 3	1852.4	12.03	1.21	13.24	33.01
	1880	11.98	1.21	13.19	33.01
	1907.6	11.47	1.21	12.68	33.01
HSUPA Subtest 4	1852.4	11.29	1.21	12.50	33.01
	1880	11.16	1.21	12.37	33.01
	1907.6	11.13	1.21	12.34	33.01
HSUPA Subtest 5	1852.4	12.93	1.21	14.14	33.01
	1880	12.67	1.21	13.88	33.01
	1907.6	12.36	1.21	13.57	33.01
HSPA+ (16QAM) Subtest-1	1852.4	11.13	1.21	12.34	33.01
	1880	11.18	1.21	12.39	33.01
	1907.6	10.42	1.21	11.63	33.01

UMTS BAND IV

UMTS BAND 4					
Mode	Frequency(MHz)	AVG Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP limitdBm)
WCDMA 1700 RMC	1712.4	14.48	1.21	15.69	30.00
	1740	13.85	1.21	15.06	30.00
	1752.6	14.12	1.21	15.33	30.00
HSDPA Subtest 1	1712.4	13.97	1.21	15.18	30.00
	1740	13.69	1.21	14.90	30.00
	1752.6	13.74	1.21	14.95	30.00
HSDPA Subtest 2	1712.4	13.75	1.21	14.96	30.00
	1740	13.87	1.21	15.08	30.00
	1752.6	13.83	1.21	15.04	30.00
HSDPA Subtest 3	1712.4	12.95	1.21	14.16	30.00
	1740	12.95	1.21	14.16	30.00
	1752.6	11.83	1.21	13.04	30.00
HSDPA Subtest 4	1712.4	13.86	1.21	15.07	30.00
	1740	14.15	1.21	15.36	30.00
	1752.6	13.73	1.21	14.94	30.00
DC-HSDPA Subtest-1	1712.4	13.60	1.21	14.81	30.00
	1740	13.76	1.21	14.97	30.00
	1752.6	13.24	1.21	14.45	30.00
DC-HSDPA Subtest-2	1712.4	12.89	1.21	14.10	30.00
	1740	13.06	1.21	14.27	30.00
	1752.6	12.18	1.21	13.39	30.00
DC-HSDPA Subtest-3	1712.4	12.87	1.21	14.08	30.00
	1740	13.05	1.21	14.26	30.00
	1752.6	11.87	1.21	13.08	30.00
DC-HSDPA Subtest-4	1712.4	13.09	1.21	14.30	30.00
	1740	13.16	1.21	14.37	30.00
	1752.6	12.80	1.21	14.01	30.00
HSUPA Subtest 1	1712.4	11.76	1.21	12.97	30.00
	1740	11.99	1.21	13.20	30.00
	1752.6	11.94	1.21	13.15	30.00
HSUPA Subtest 2	1712.4	12.77	1.21	13.98	30.00
	1740	13.24	1.21	14.45	30.00
	1752.6	12.62	1.21	13.83	30.00
HSUPA Subtest 3	1712.4	12.02	1.21	13.23	30.00
	1740	11.70	1.21	12.91	30.00
	1752.6	11.89	1.21	13.10	30.00
HSUPA Subtest 4	1712.4	11.95	1.21	13.16	30.00
	1740	11.89	1.21	13.10	30.00
	1752.6	11.39	1.21	12.60	30.00
HSUPA Subtest 5	1712.4	13.56	1.21	14.77	30.00
	1740	13.81	1.21	15.02	30.00
	1752.6	13.09	1.21	14.30	30.00
HSPA+ (16QAM) Subtest-1	1712.4	11.64	1.21	12.85	30.00
	1740	11.45	1.21	12.66	30.00
	1752.6	10.84	1.21	12.05	30.00

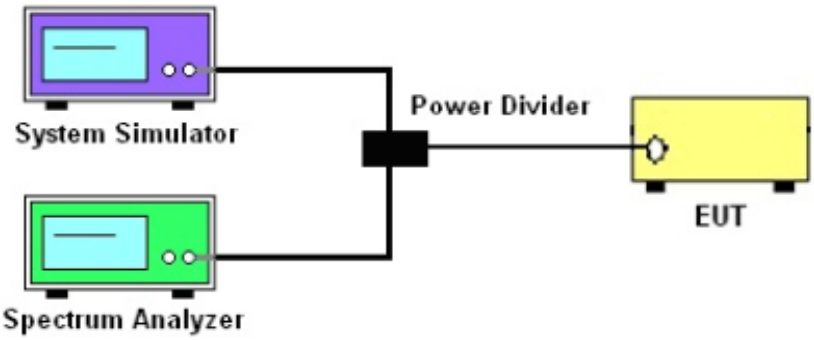
4. PEAK-TO-AVERAGE RATIO

4.1 DESCRIPTION OF THE CONDUCTED OUTPUT POWER MEASUREMENT

4.1.1 MEASUREMENT METHOD

Use one of the procedures presented in 4.1.3 to measure the total peak power and record as PPk. Use one of the applicable procedures presented 4.1.3 to measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:
PAPR (dB) = PPk (dBm) - PAvg (dBm).

4.1.2 TEST SETUP



4.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01 v03r01 Section 5.7 and ANSI C63.262015Section 5.2.6

2. The EUT was connected to spectrum and system simulator via a power divider

3. Select lowest, middle, and highest channels for each band and different modulation.

4. Set the test probe and measure the peak and average power of the spectrum analyzer

5. Record the deviation as Peak to Average Ratio.

4.1.4 TEST RESULTS

GSM 850		
Mode	Frequency (MHz)	PAR
GSM 850	824.2	2.69
	836.6	2.69
	848.8	2.68
GPRS 850	824.2	2.72
	836.6	2.73
	848.8	2.72
EGPRS 850	824.2	9.71
	836.6	9.00
	848.8	9.24

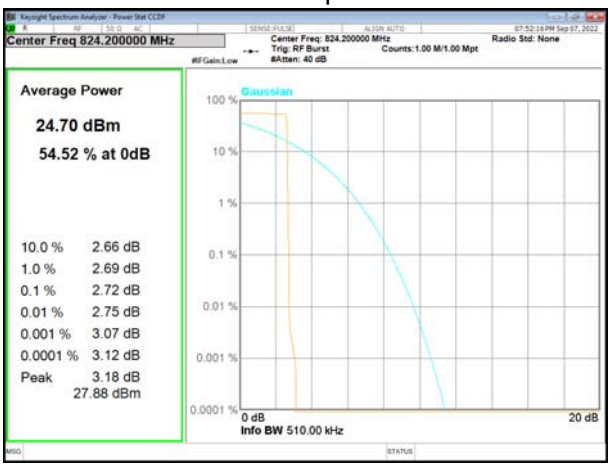
PCS 1900		
Mode	Frequency (MHz)	PAR
PCS1900	1850.2	2.69
	1880	2.68
	1909.8	2.67
GPRS1900	1850.2	2.73
	1880	2.71
	1909.8	2.71
EGPRS1900	1850.2	7.09
	1880	6.68
	1909.8	7.16

UMTS Band 2		
Mode	Frequency (MHz)	PAR
WCDMA 1900 RMC	1852.4	2.95
	1880	2.82
	1907.6	2.87
HSDPA 1900	1852.4	3.03
	1880	2.98
	1907.6	3.00
HSUPA 1900	1852.4	3.46
	1880	3.43
	1907.6	3.52

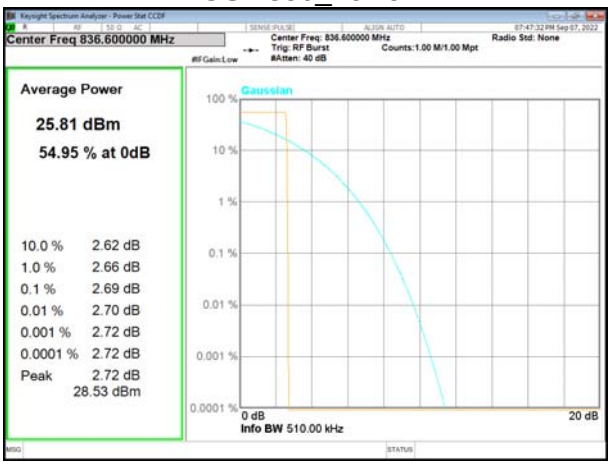
UMTS Band 5		
Mode	Frequency (MHz)	PAR
WCDMA 850 RMC	826.4	2.84
	836.6	2.88
	846.6	2.88
HSDPA 850	826.4	2.99
	836.6	3.04
	846.6	3.03
HSUPA 850	826.4	3.58
	836.6	3.42
	846.6	3.67

UMTS Band 4		
Mode	Frequency (MHz)	PAR
WCDMA 1700 RMC	1712.4	3.08
	1740	3.07
	1752.6	3.12
HSDPA 1700	1712.4	3.20
	1740	3.18
	1752.6	3.20
HSUPA 1700	1712.4	3.59
	1740	3.56
	1752.6	3.57

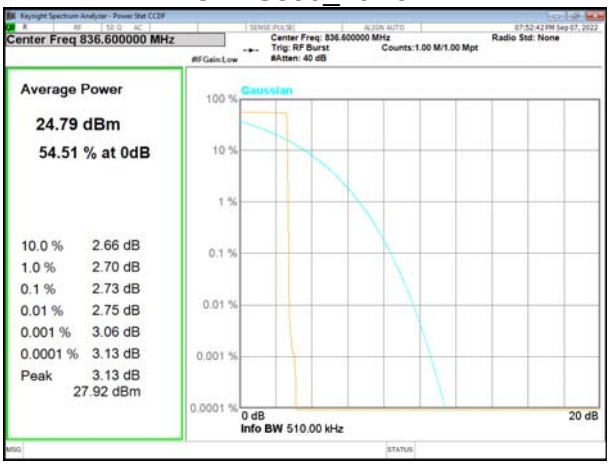
GSM850_Lower



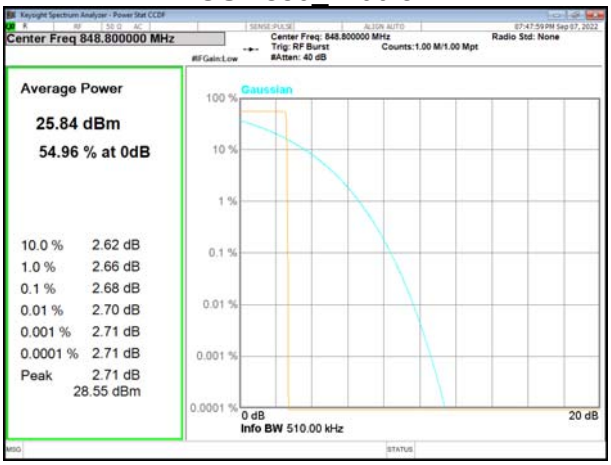
GPRS850_Lower



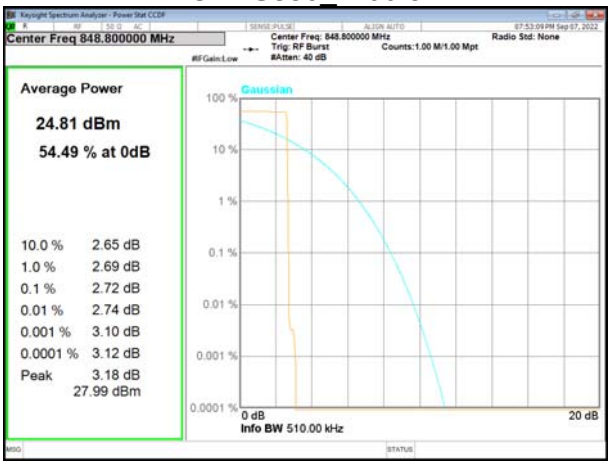
GSM850_Middle



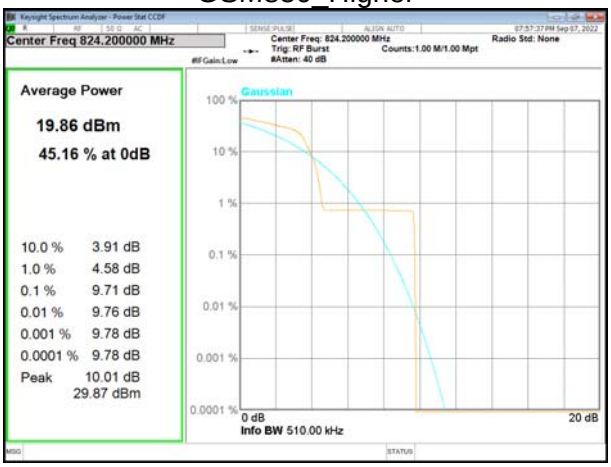
GPRS850_Middle



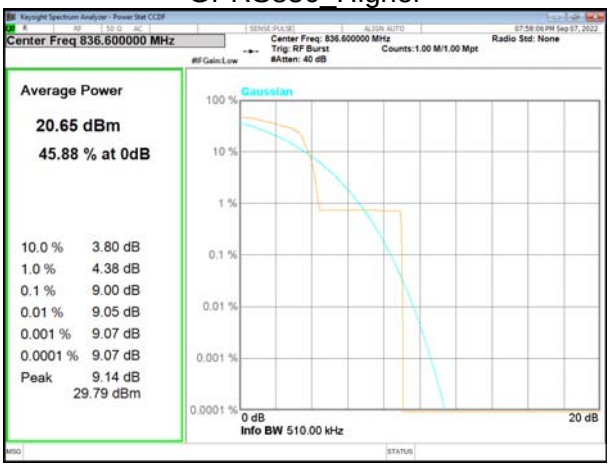
GSM850_Higher



GPRS850_Higher

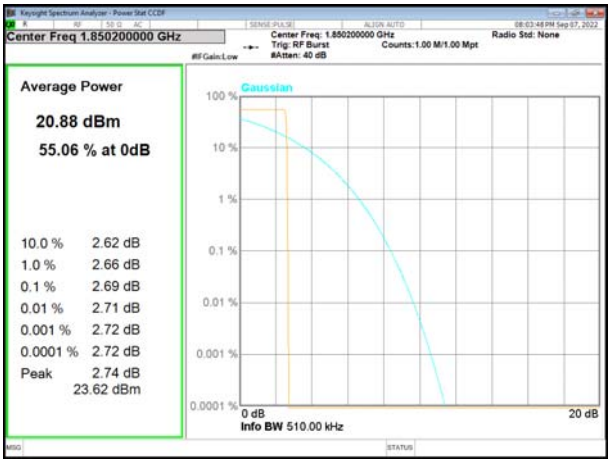


EGPRS850_Low

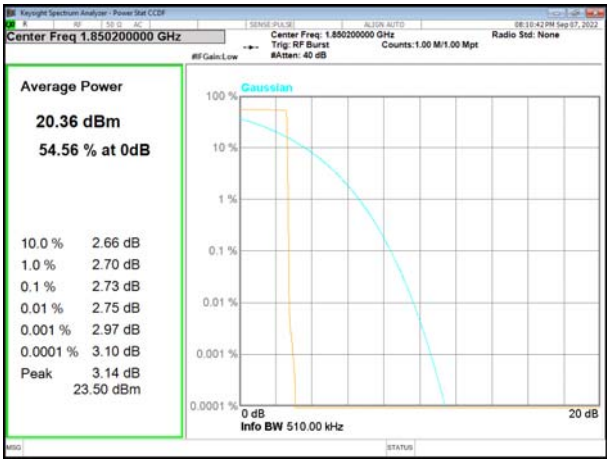


EGPRS850_Middle

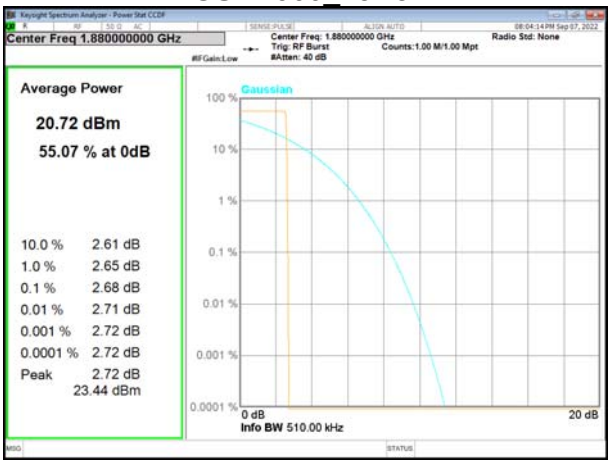
EGPRS850_High



GSM1900_Lower

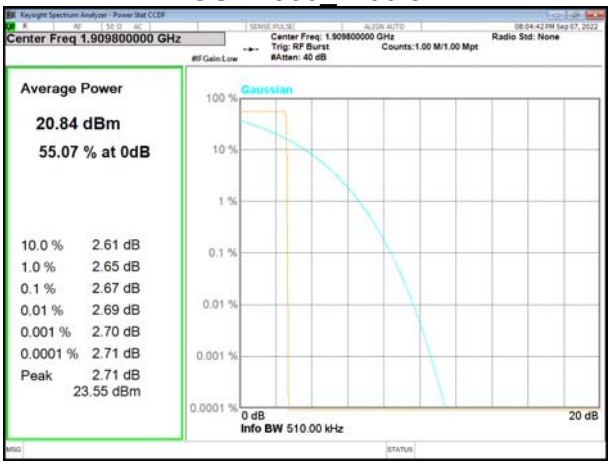


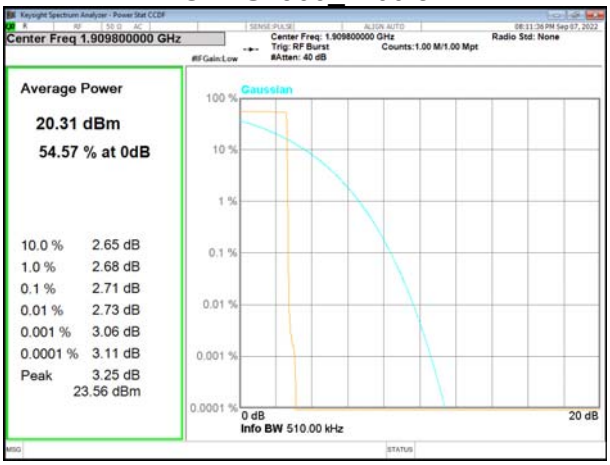
GPRS1900_Lower



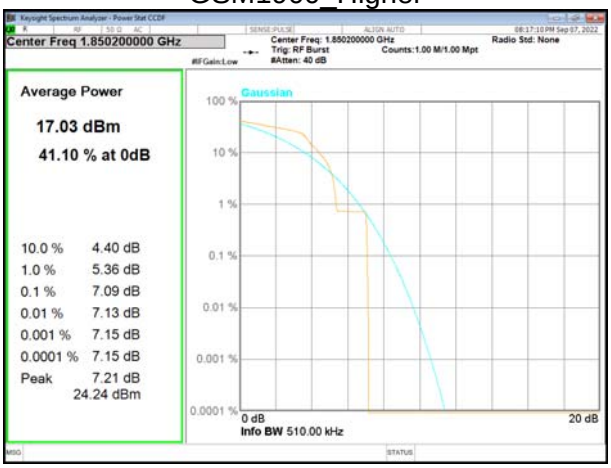
GSM1900_Middle

GPRS1900_Middle





GSM1900_Higher



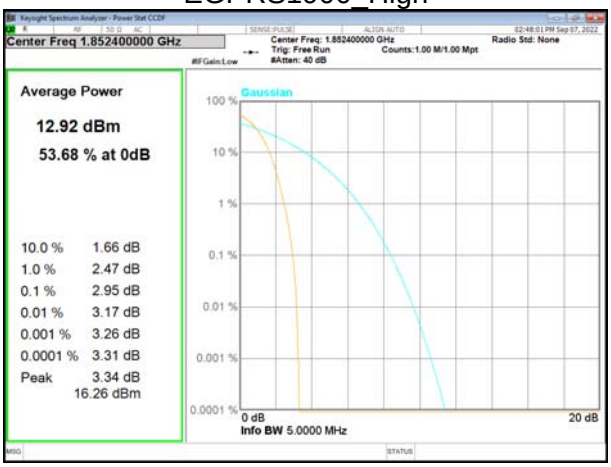
GPRS1900_Higher

EGPRS1900_Low

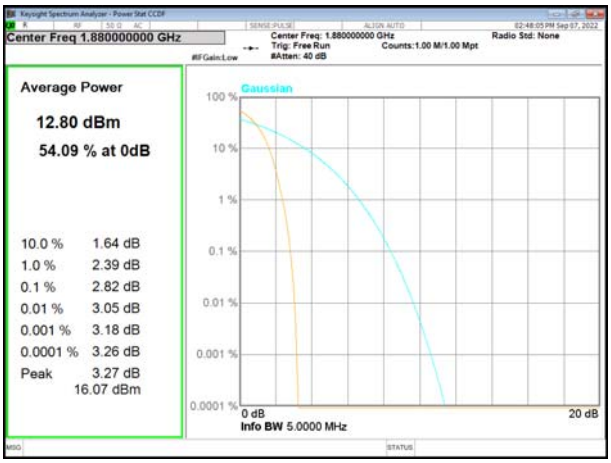
EGPRS1900_Middle

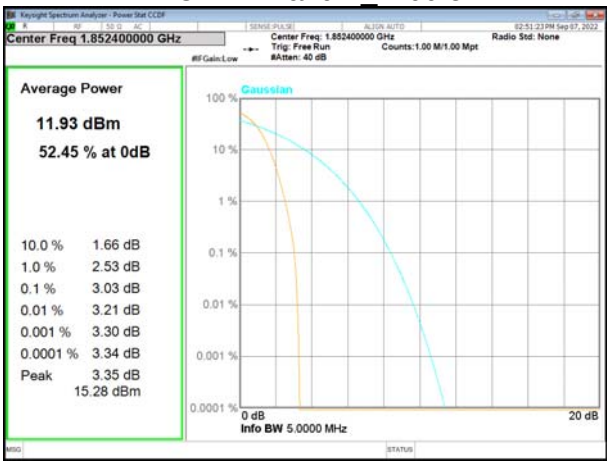
EGPRS1900_High

WCDMA Band 2_Low

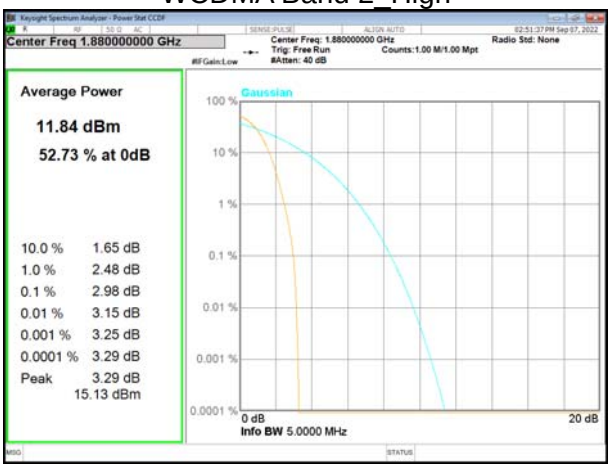


WCDMA Band 2_Middle



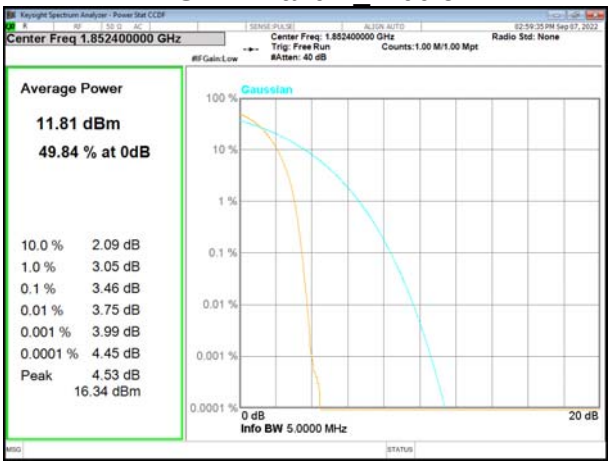


WCDMA Band 2_High



HSDPA Band 2_Low

HSDPA Band 2_Middle

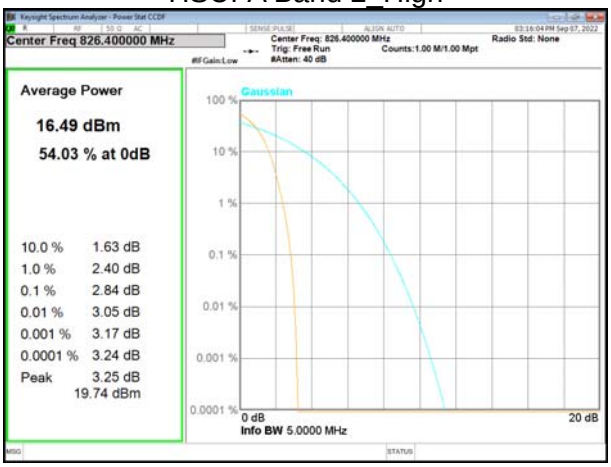


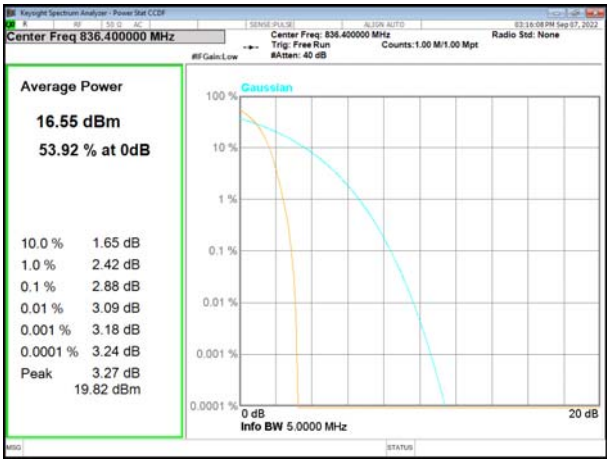
HSDPA Band 2_High

HSUPA Band 2_Low

HSUPA Band 2_Middle

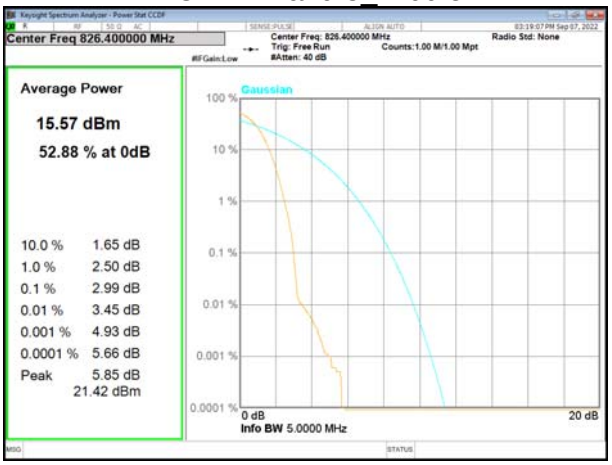
HSUPA Band 2_High



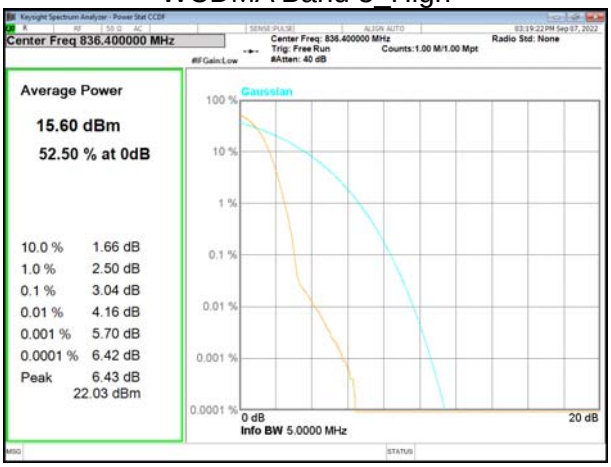


WCDMA Band 5_Low

WCDMA Band 5_Middle



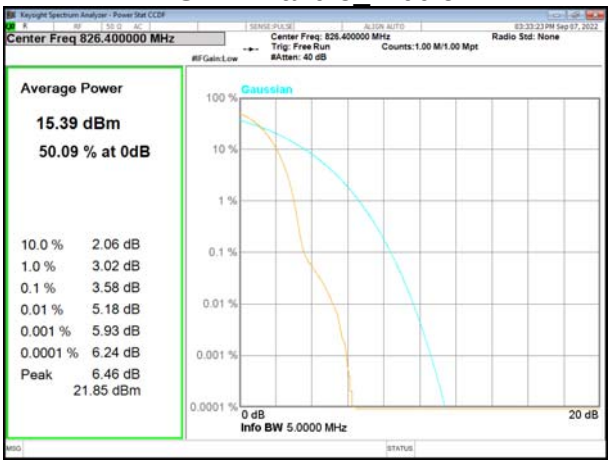
WCDMA Band 5_High

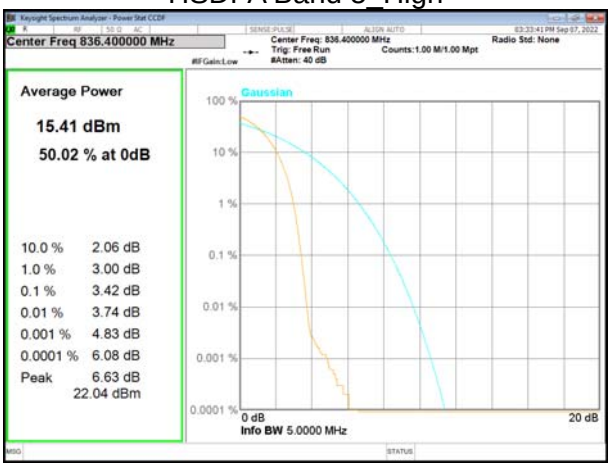


HSDPA Band 5_Low

HSDPA Band 5_Middle

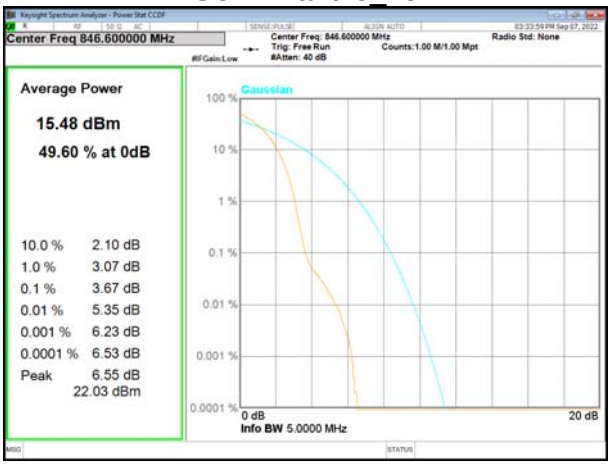
HSDPA Band 5_High



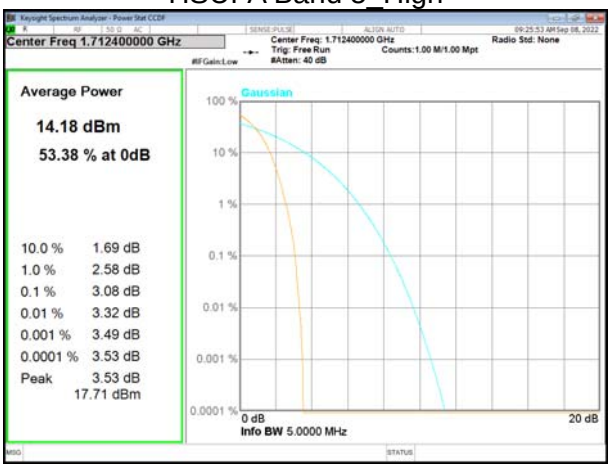


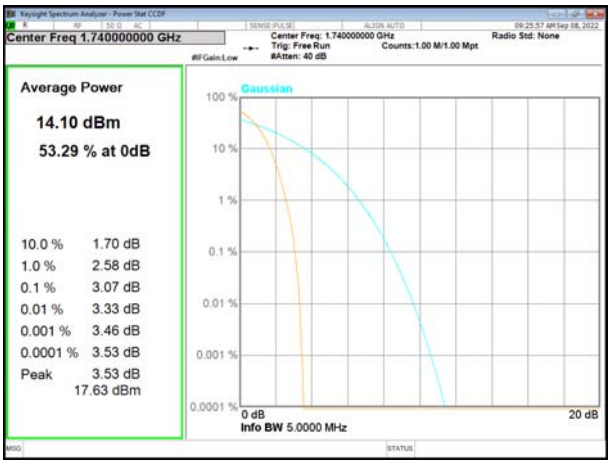
HSUPA Band 5_Low

HSUPA Band 5_Middle



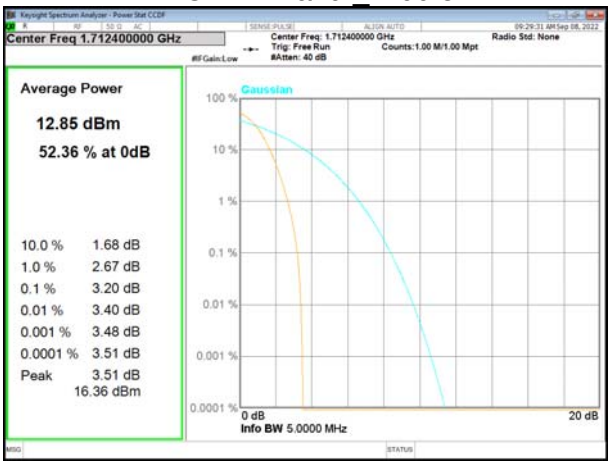
HSUPA Band 5_High



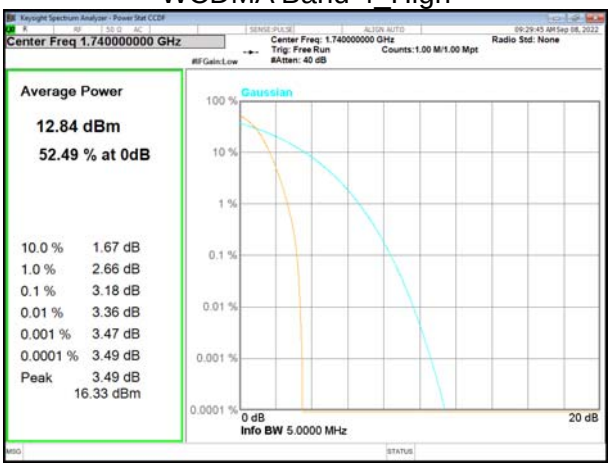


WCDMA Band 4_Low

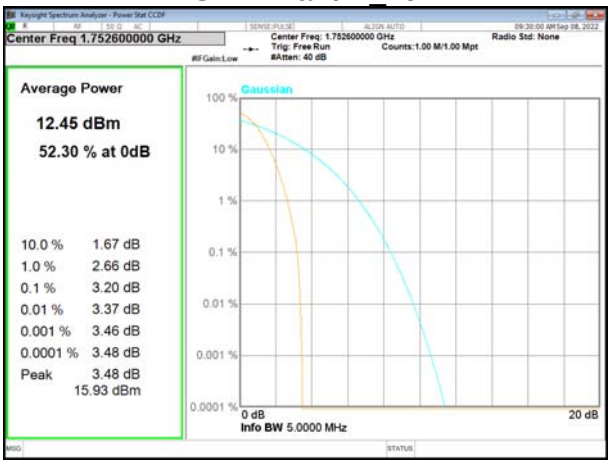
WCDMA Band _Middle



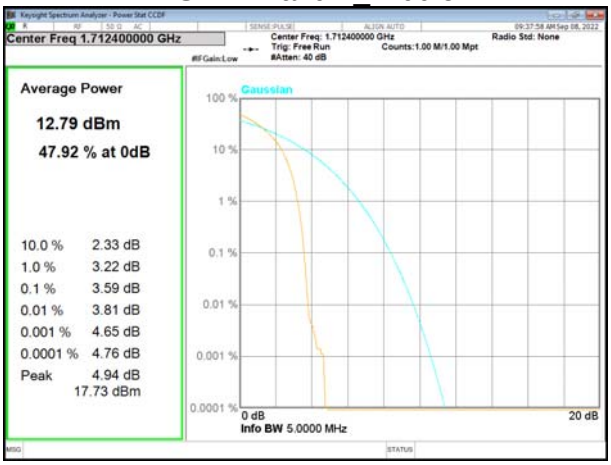
WCDMA Band 4_High



HSDPA Band 4_Low



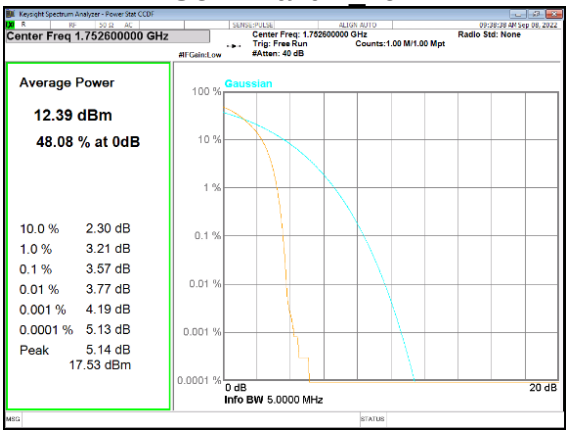
HSDPA Band 4_Middle



HSDPA Band 4_High

HSUPA Band 4_Low

HSUPA Band 4_Middle



HSUPA Band 4_High

5. OCCUPIED BANDWIDTH

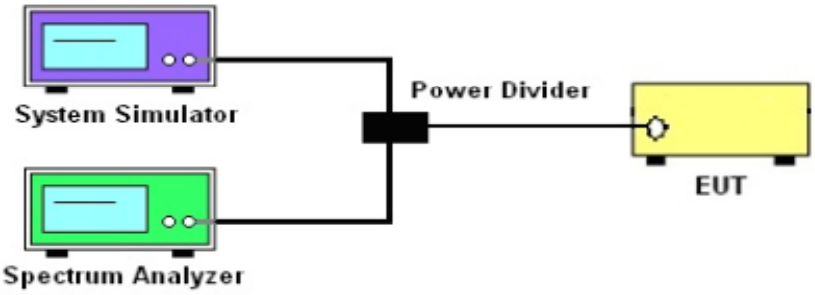
5.1 DESCRIPTION OF OCCUPIED BANDWIDTH MEASUREMENT

5.1.1 MEASUREMENT METHOD

1.The occupied bandwidth is the width of a frequency band such that, below the lower and above theupper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% ofthe total mean transmitted power.

2.The 26 db emission bandwidth is defined as the frequency range between two points, one above andone below the carrier frequency, at which the spectral density of the emission is attenuated 26 dbbelow the maximum in-band spectral density of the modulated signal. spectral density (power per unitbandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% ofthe emission bandwidth.

5.1.2 TEST SETUP



5.1.3 TEST PROCEDURES

1. The testing follows FCC KDB 971168 D01 v03r01 Section 4.2 and 4.3.

2. The EUT was connected to spectrum and system simulator via a power divider.

3. Select lowest, middle, and highest channels for each band and different modulation.

4. Set the test probe and measure the Occupied Bandwidth of the spectrum analyzer.

5. Measure and record the Occupied Bandwidth from the Spectrum Analyzer.

5.1.4 MEASUREMENT RESULT

GSM Bandwidth [KHz]						
Mode	Lowest		Middle		Highest	
	99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
GSM850	245	308	245	315	245	311
GPRS850	246	316	246	315	243	318
EGPRS850	253	313	259	333	252	297

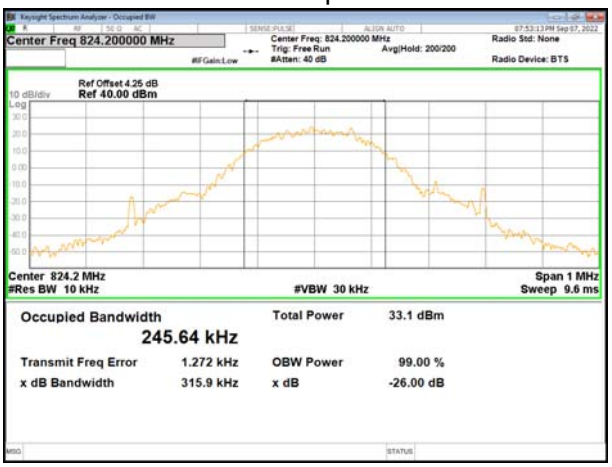
GSM Bandwidth [KHz]						
Mode	Lowest		Middle		Highest	
	99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
GSM1900	246	315	241	313	247	317
GPRS1900	246	331	248	316	243	317
EGPRS1900	236	296	250	311	243	291

WCDMA Bandwidth [MHz]						
Mode	Lowest		Middle		Highest	
	99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
WCDMA 2	4191	4714	4170	4710	4178	4702
HSDPA 2	4186	4693	4167	4695	4178	4710
HSUPA 2	4197	4757	4199	4703	4190	4992

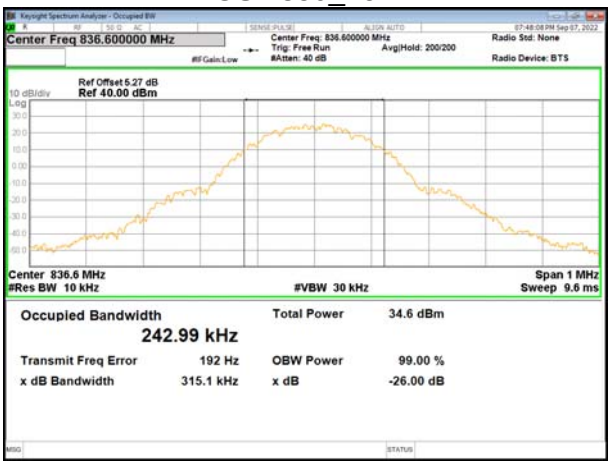
WCDMA Bandwidth [MHz]						
Mode	Lowest		Middle		Highest	
	99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
WCDMA 5	4181	4733	4178	4676	4178	4719
HSDPA 5	4188	4702	4198	4703	4180	4702
HSUPA 5	4195	4706	4194	4712	4194	4776

WCDMA Bandwidth [MHz]						
Mode	Lowest		Middle		Highest	
	99% BW	26dB BW	99% BW	26dB BW	99% BW	26dB BW
WCDMA 4	4158	4667	4153	4665	4158	4663
HSDPA 4	4179	4675	4148	4665	4157	4666
HSUPA 4	4139	4648	4162	4689	4151	4667

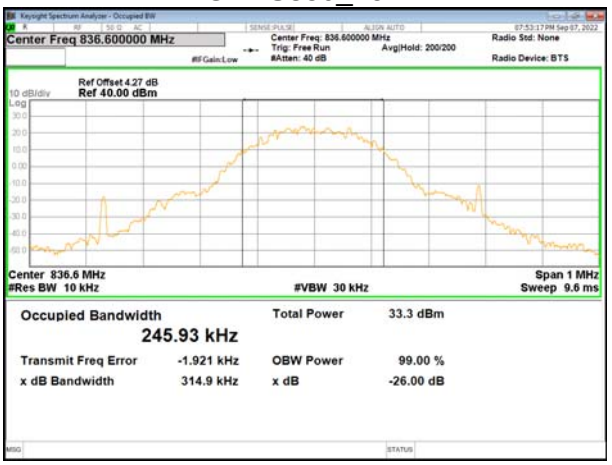
GSM850_Low



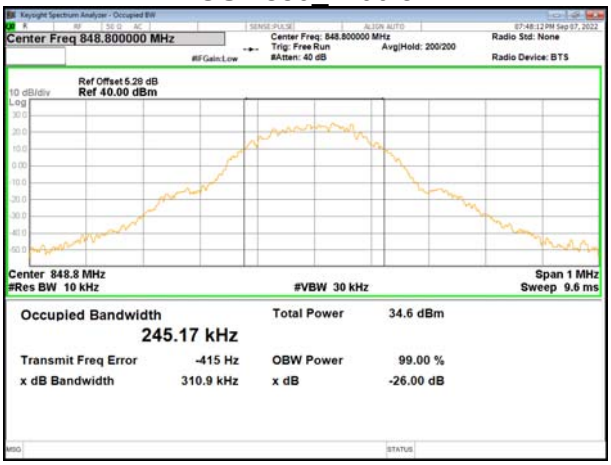
GPRS850_Low



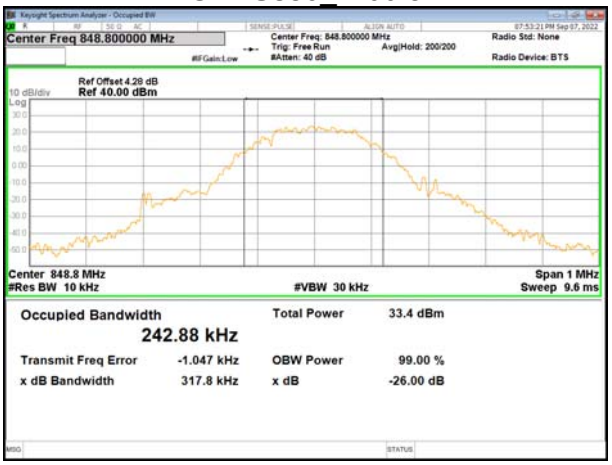
GSM850_Middle



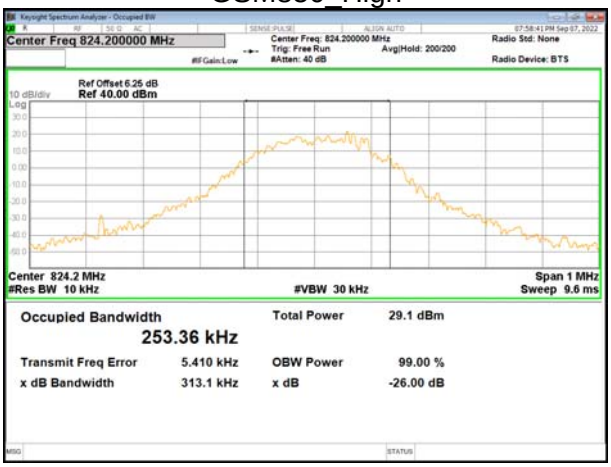
GPRS850_Middle



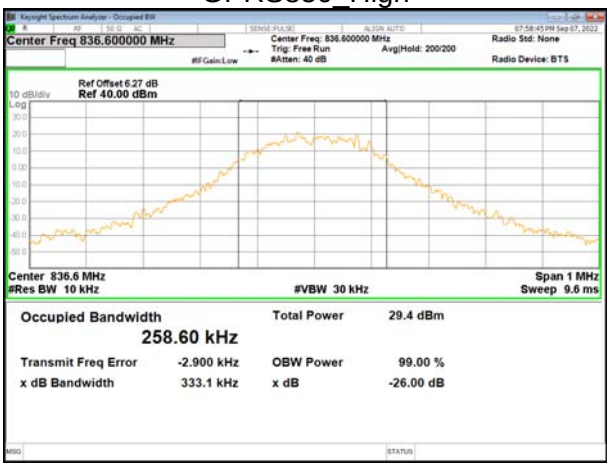
GSM850_High



GPRS850_High

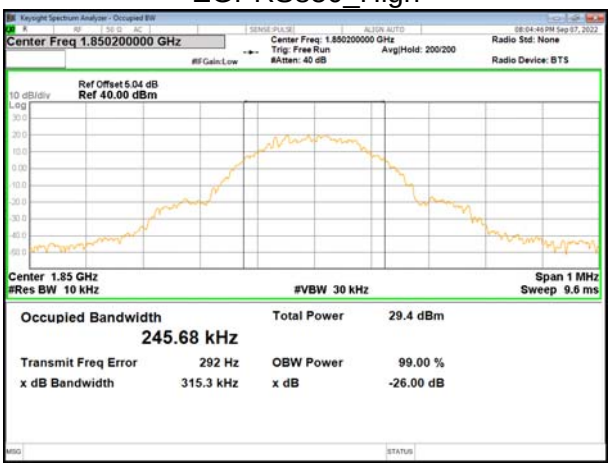


EGPRS850_Low

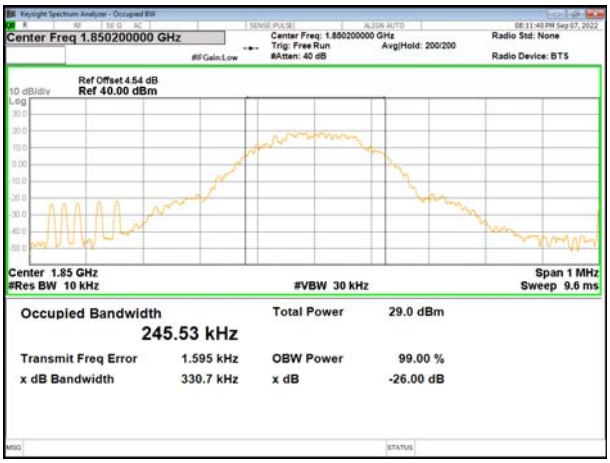


EGPRS850_Middle

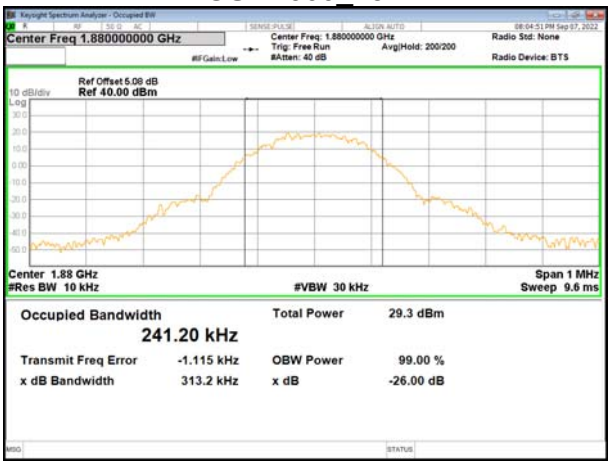
EGPRS850_High



GSM1900_Low



GPRS1900_Low



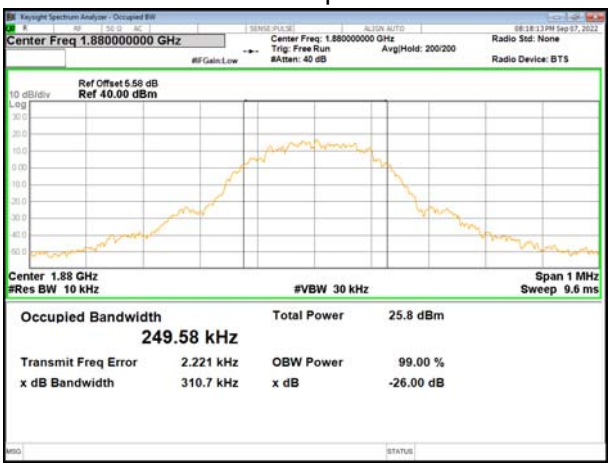
GSM1900_Middle

GPRS1900_Middle

GSM1900_High

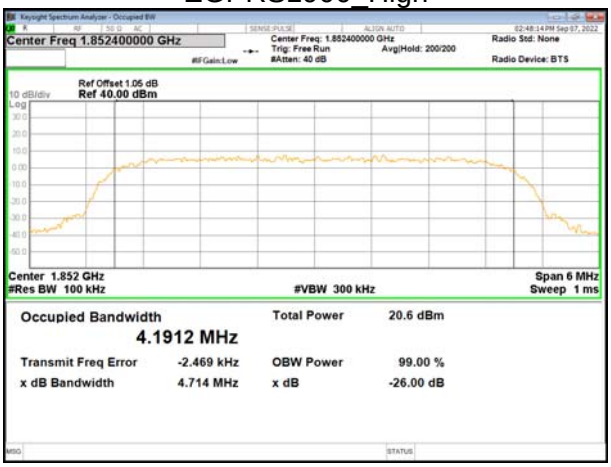
GPRS1900_High

EGPRS1900_Low

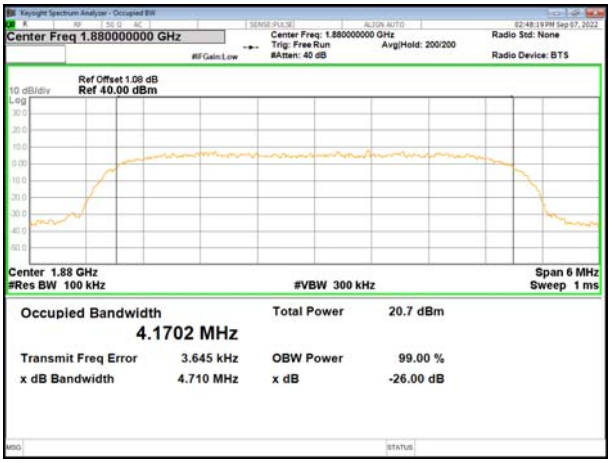


EGPRS1900_Middle

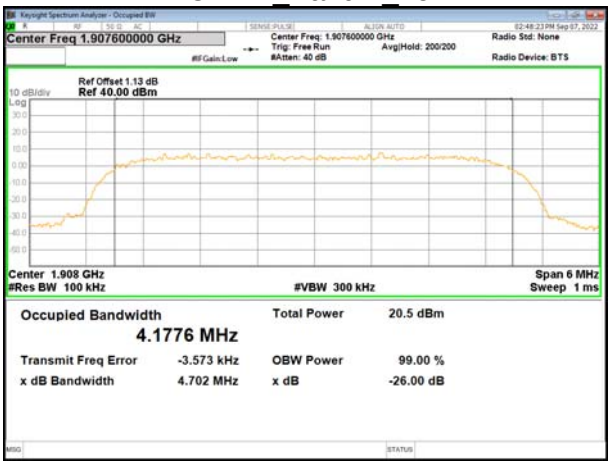
EGPRS1900_High



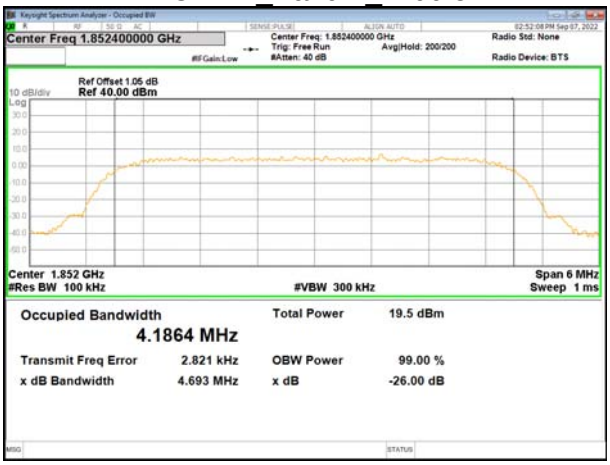
WCDMA_Band 2_Low



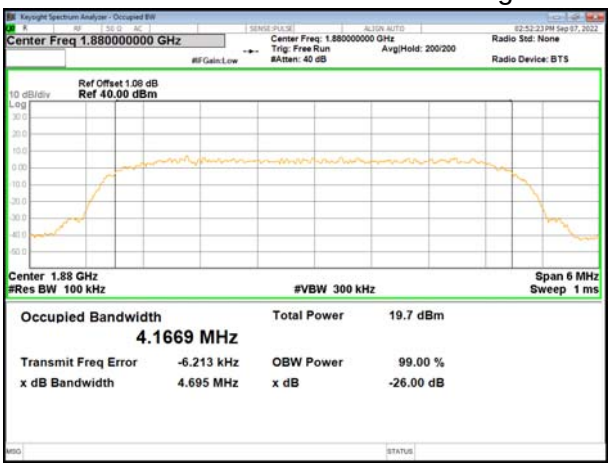
WCDMA_Band 2_Middle



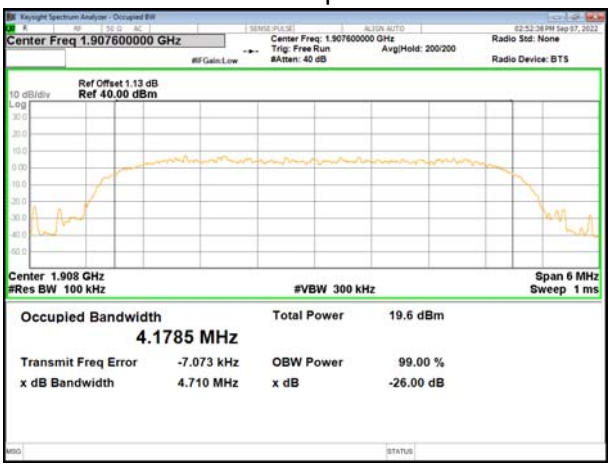
WCDMA_Band 2_High



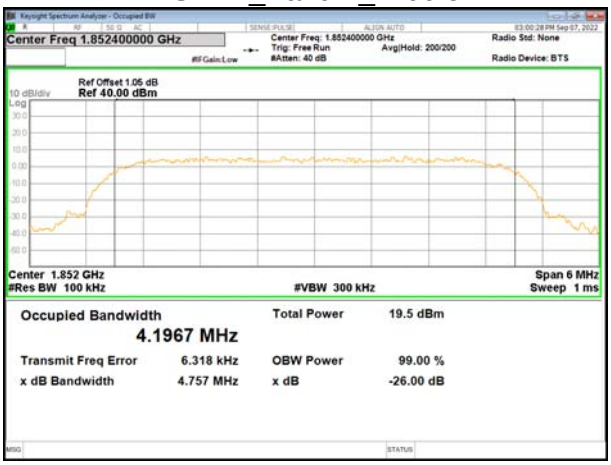
HSDPA_Band 2_Low



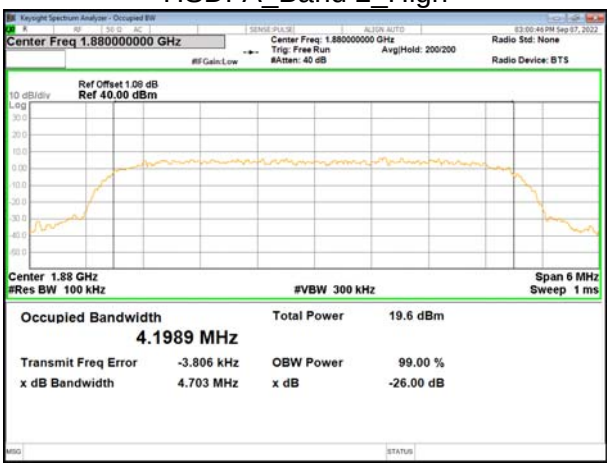
HSDPA_Band 2_Middle



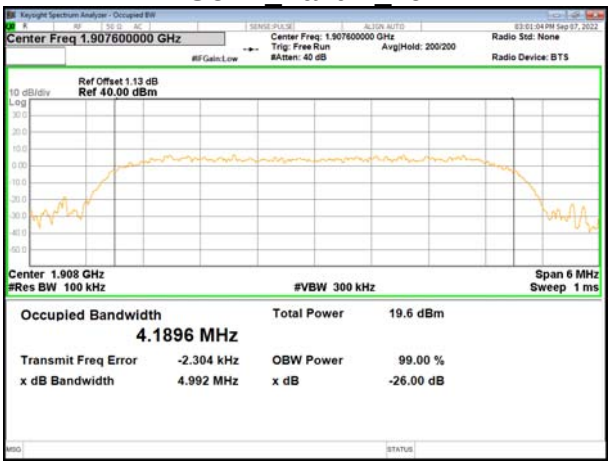
HSDPA_Band 2_High



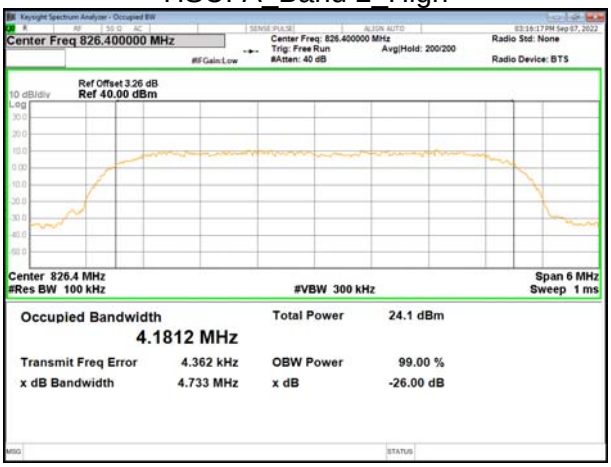
HSUPA_Band 2_Low



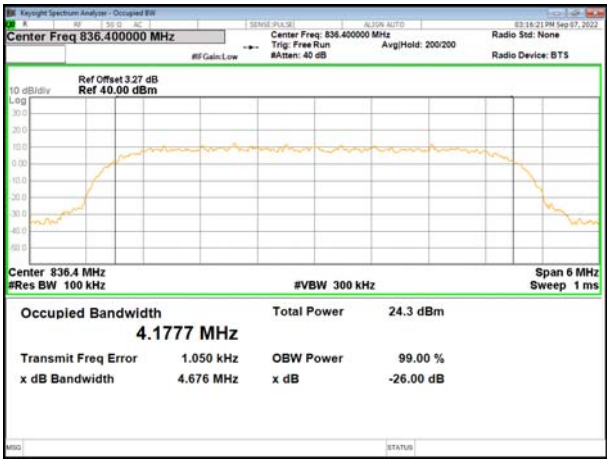
HSUPA_Band 2_Middle



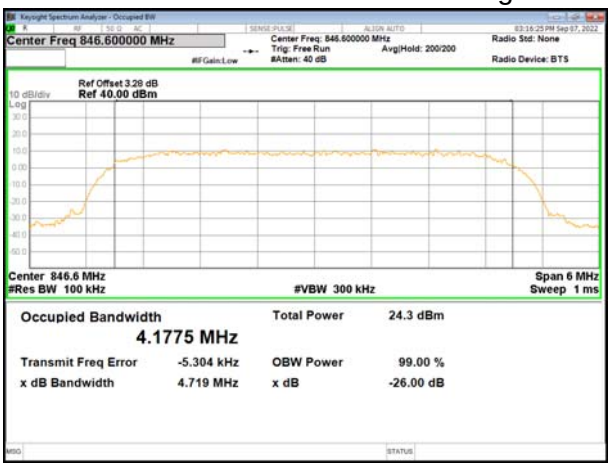
HSUPA_Band 2_High



WCDMA_Band 5_Low



WCDMA_Band 5_Middle



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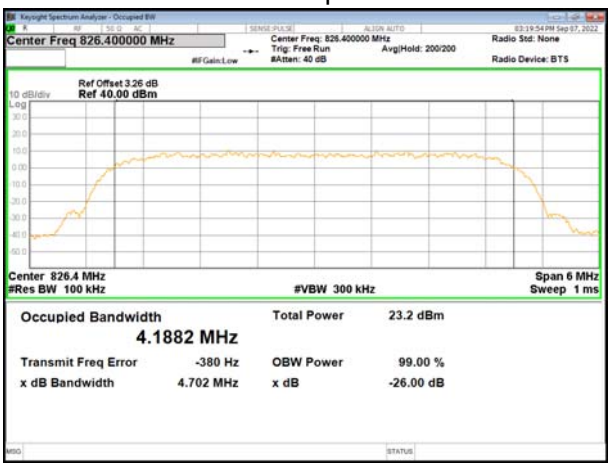
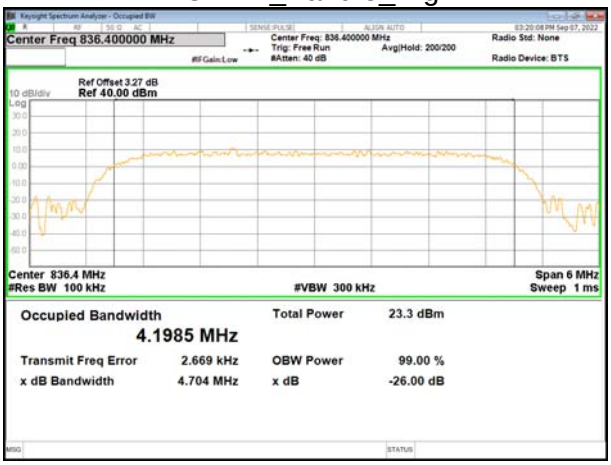
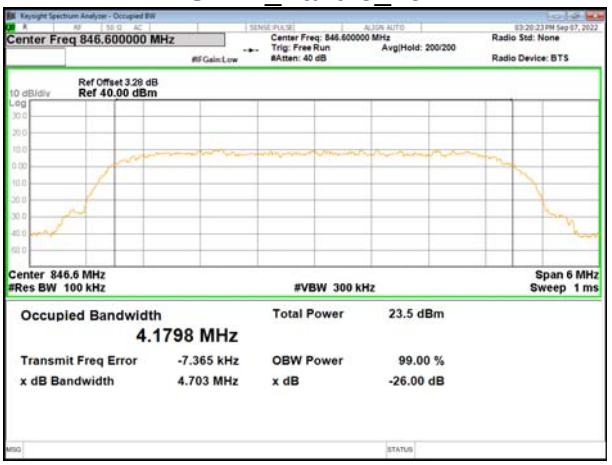


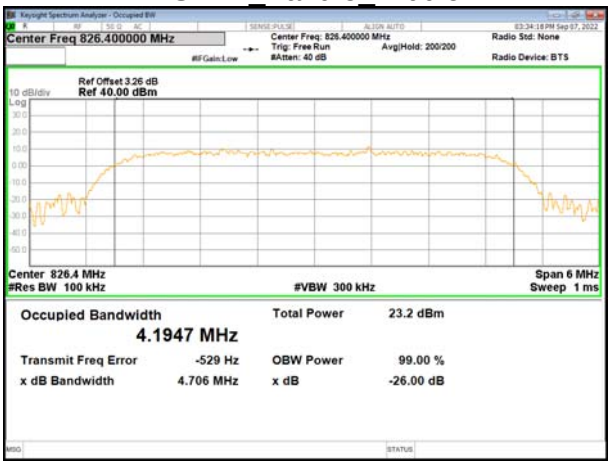
HSDPA_Band 5_Low



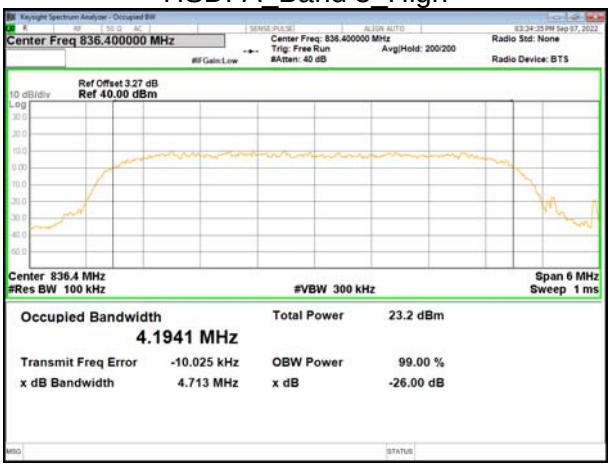
HSDPA_Band 5_Middle



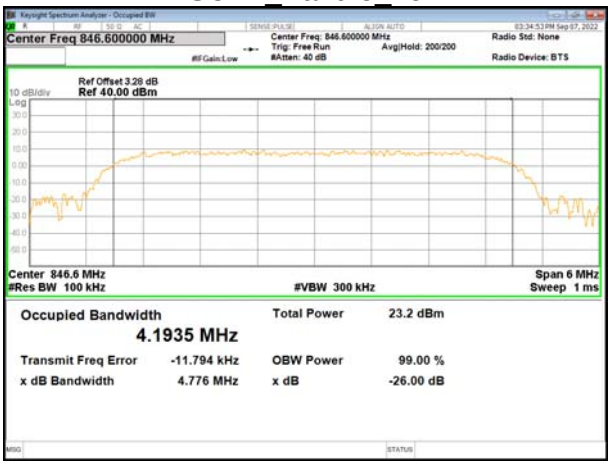
HSDPA_Band 5_High



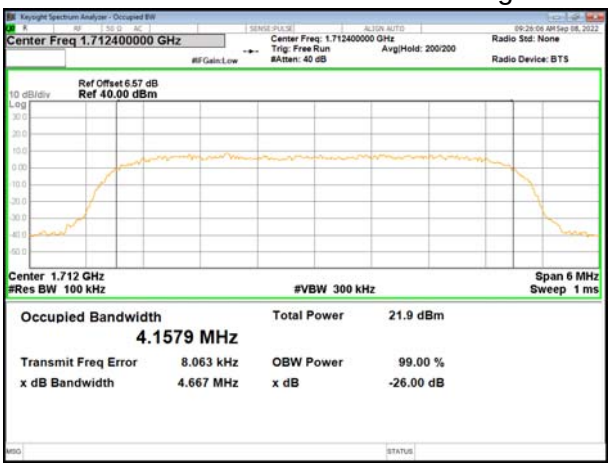
HSUPA_Band 5_Low



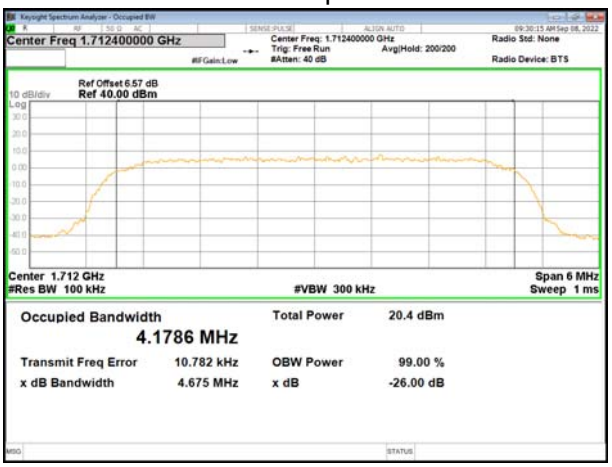
HSUPA_Band 5_Middle



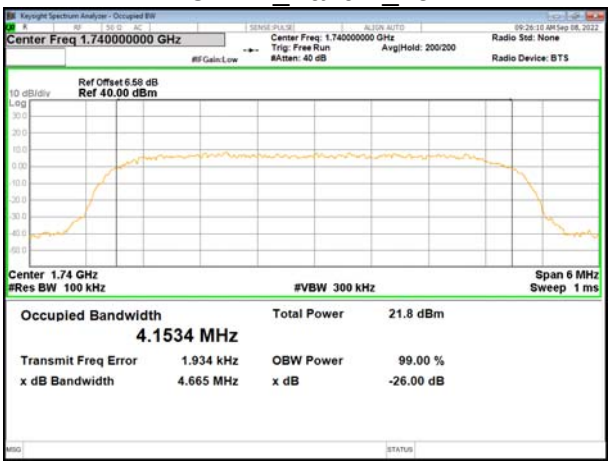
HSUPA_Band 5_High



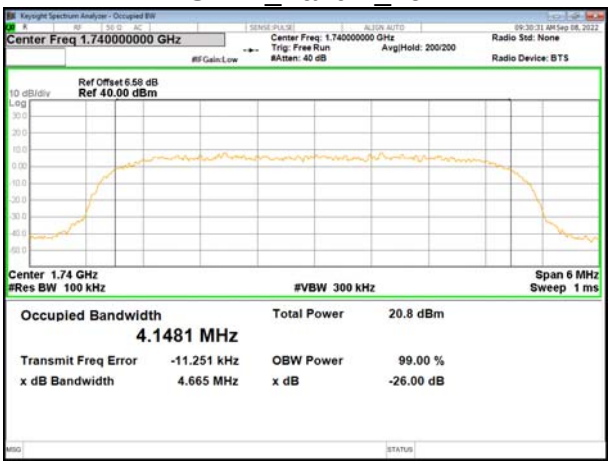
WCDMA_Band 4_Low



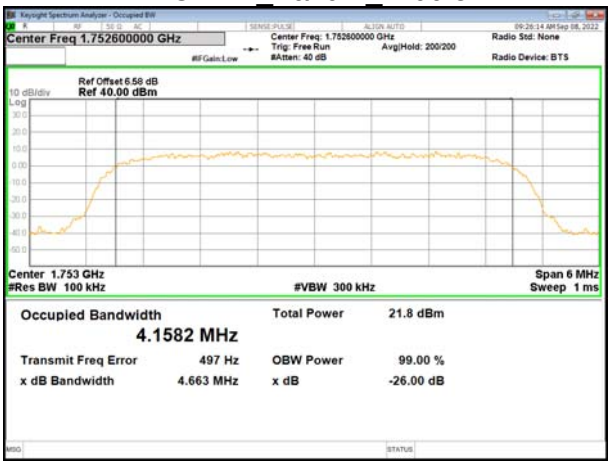
HSDPA_Band 4_Low



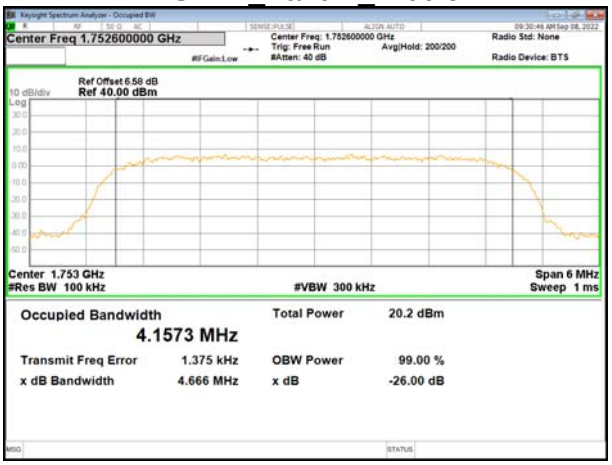
WCDMA_Band 4_Middle



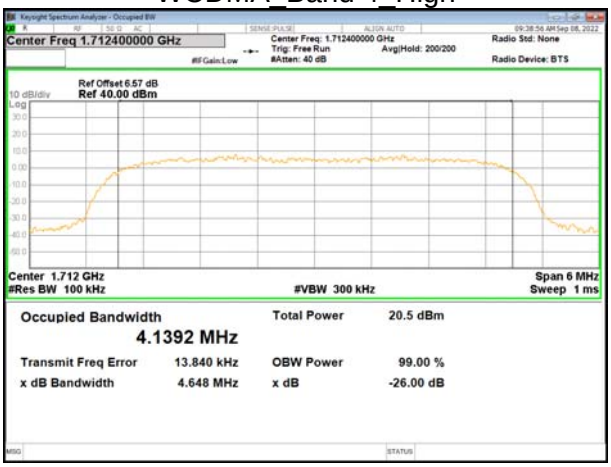
HSDPA_Band 4_Middle



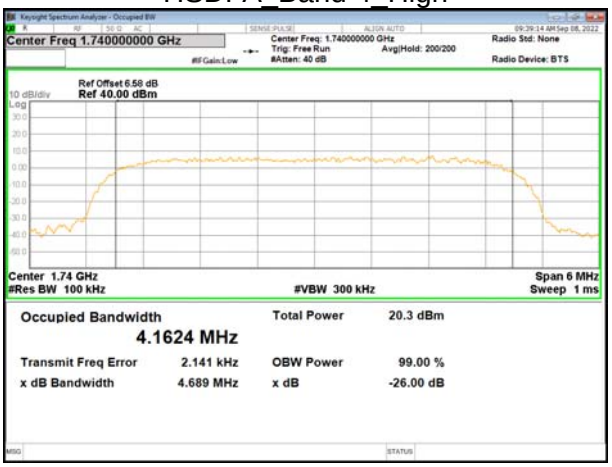
WCDMA_Band 4_High



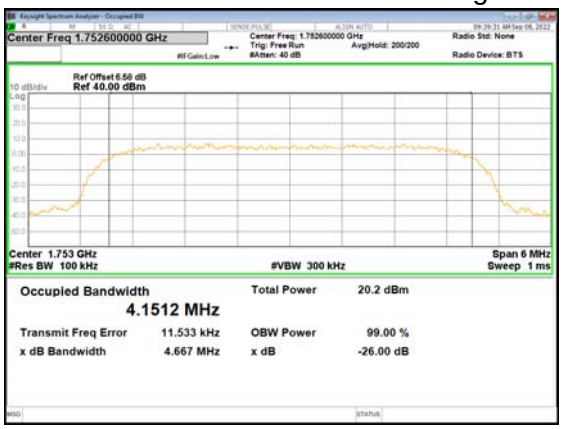
HSDPA_Band 4_High



HSUPA_Band 4_Low



HSUPA_Band 4_Middle



HSUPA_Band 4_High

6. CONDUCTED BAND EDGE

6.1 DESCRIPTION OF CONDUCTED BAND EDGE MEASUREMENT

6.1.1 MEASUREMENT METHOD

1.§22.917(a)For operations in the 824 – 849 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below thetransmitter power P(Watts) in a 100kHz bandwidth. However, in the 1MHz bands immediately outsideand adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of theemission bandwidth of the fundamental emission of the transmitter may be employed.

2.§24.238 (a)
For operations in the 1850-1910 and 1930-1990 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dBbelow the transmitter power P(Watts) in a 1MHz bandwidth. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed

3.§27.53 (h)

For operations in the 1710 – 1755 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 1 MHz bandwidth. However, in the 1MHz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

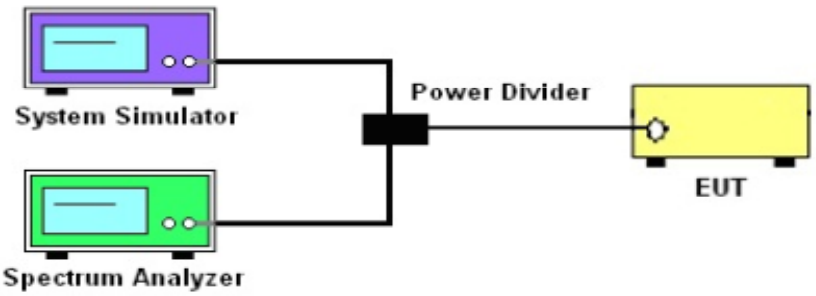
4. §27.53(m)(4)

For operations in the 2500 MHz ~ 2570 MHz band this section, the attenuation factor shall be not less than 40 + 10 log (P) dB on allfrequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dBon all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P)dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition,the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHzand 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licenseesoperating on frequencies below 2495 MHz may also submit a documented interference complaintagainst BRS licensees operating on channel BRS Channel 1 on the same terms and conditions asadjacent channel BRS or EBS licensees.

5. §27.53 (g)

For operations in the 698 -746 MHz band, the FCC limit is 43 + 10log10(P[Watts]) dB below the transmitter power P(Watts) in a 100 kHz bandwidth. However, in the 100 kilohertz bands immediatelyoutside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz maybe employed.

6.1.2 TEST SETUP



6.1.3 TEST PROCEDURES

1.The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.

2. The EUT was connected to spectrum analyzer and system simulator via a power divider.

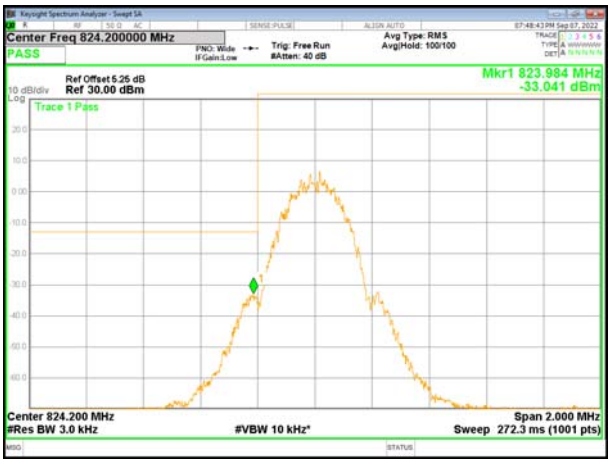
3. The band edges of low and high channels for the highest RF powers were measured. Set RBW >= 1% EBW in the 1MHz band immediately outside and adjacent to the band edge.

4. Set spectrum analyzer with RMS/AVG detector.

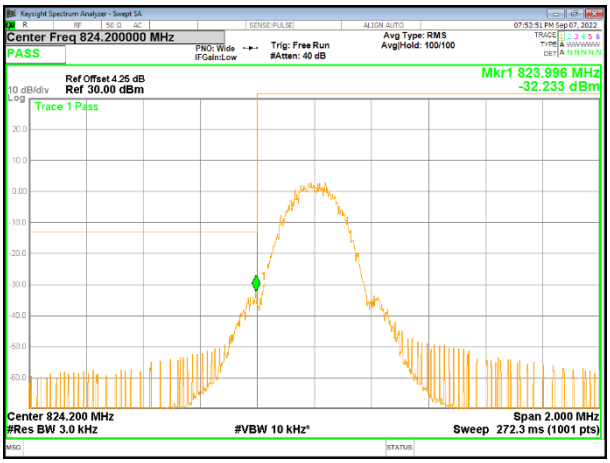
5. The RF fundamental frequency should be excluded against the limit line in the operatingfrquency band.

6.The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
= P(W)- [43 + 10log(P)] (dB)
= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
= -13dBm.

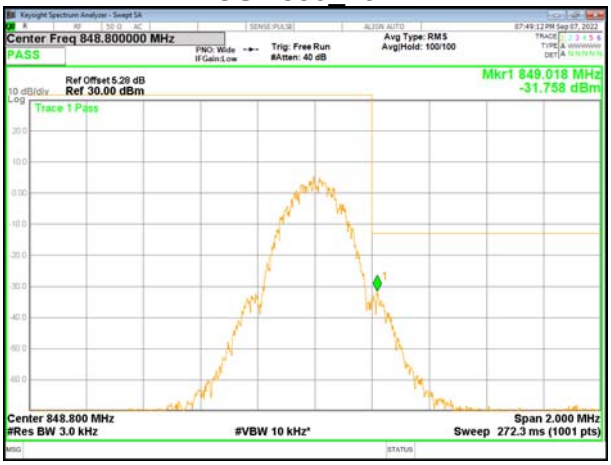
6.1.4 MEASUREMENT RESULT



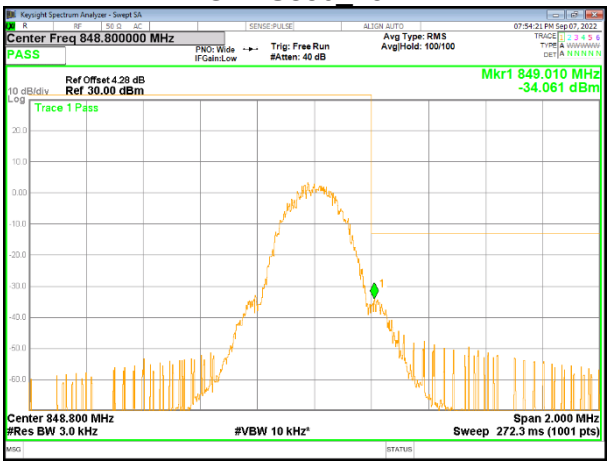
GSM850_Low



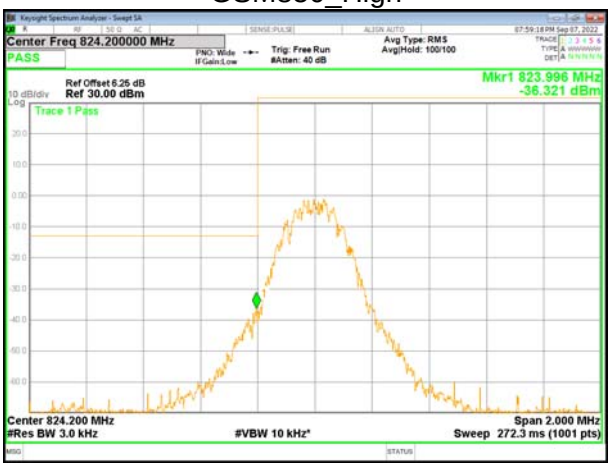
GPRS850_Low



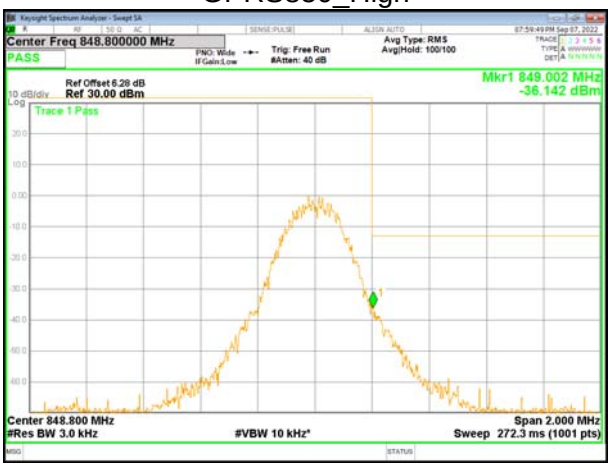
GSM850_High



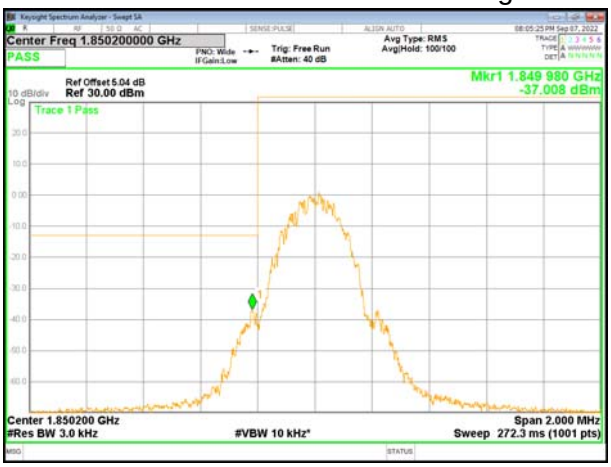
GPRS850_High



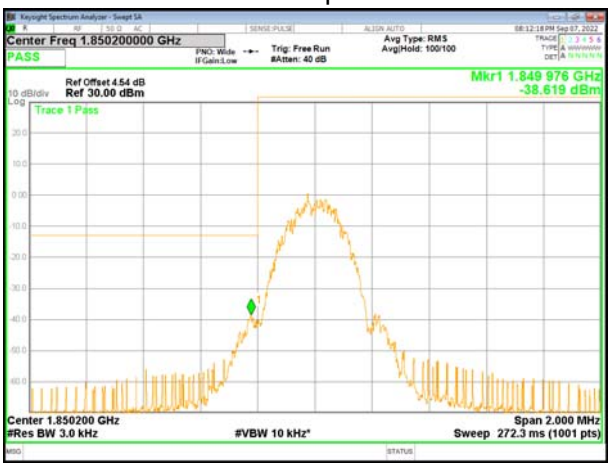
EGPRS850_Low



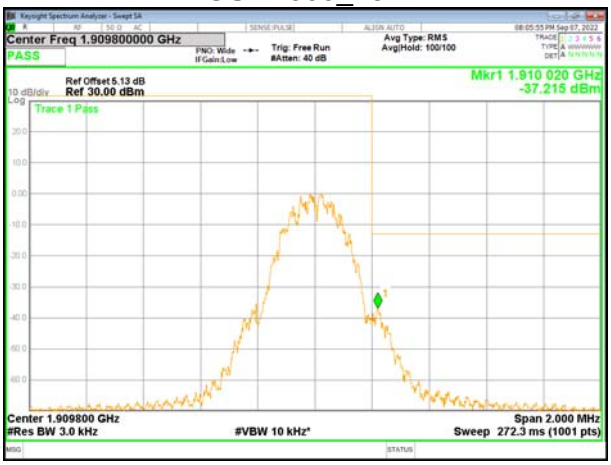
EGPRS850_High



GSM1900_Low



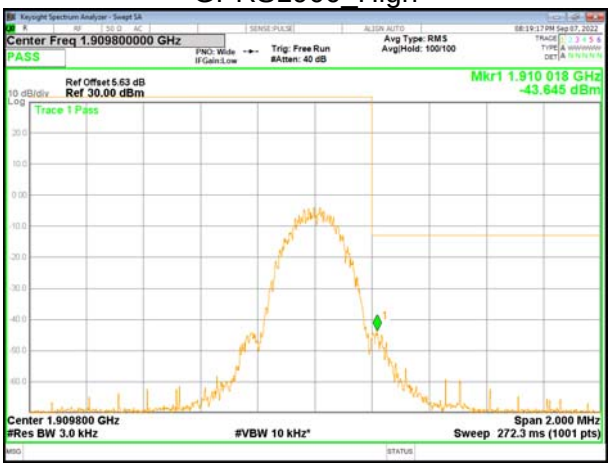
GPRS1900_Low



GSM1900_High

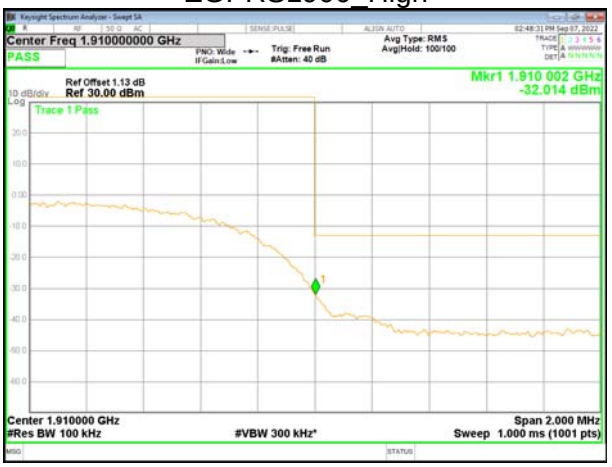
GPRS1900_High

EGPRS1900_Low



EGPRS1900_High

WCDMA_Band 2_Low



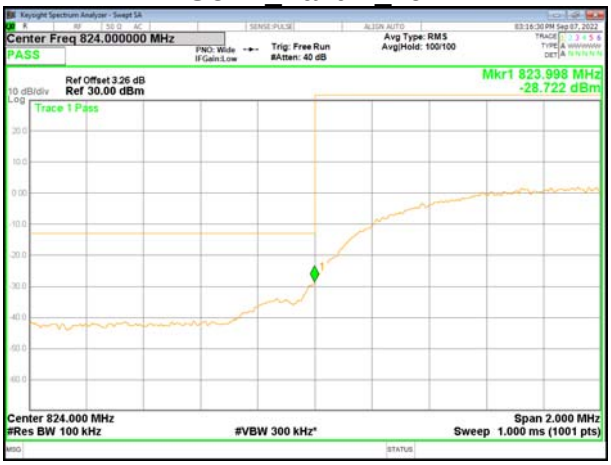
WCDMA_Band 2_High

HSDPA_Band 2_Low

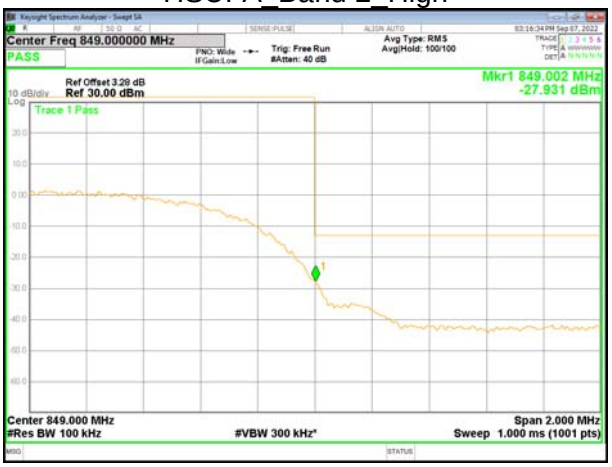
HSDPA_Band 2_High

HSUPA_Band 2_Low

HSUPA_Band 2_High

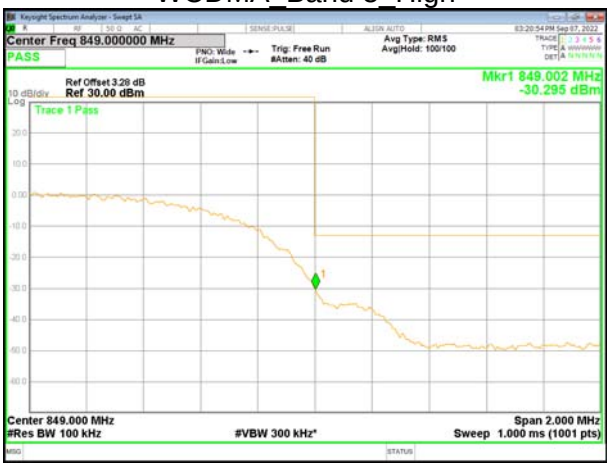


WCDMA_Band 5_Low



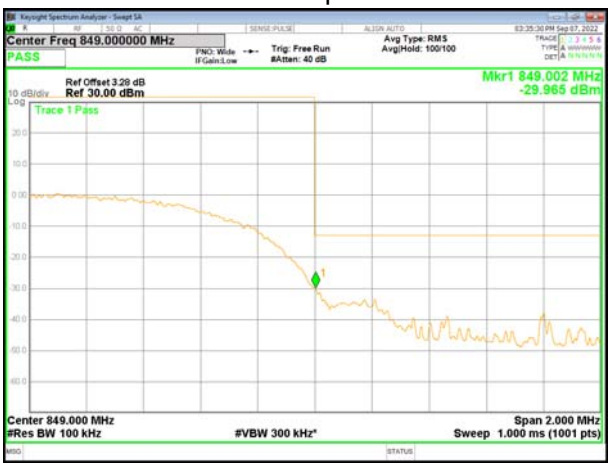
WCDMA_Band 5_High

HSDPA_Band 5_Low



HSDPA_Band 5_High

HSUPA_Band 5_Low

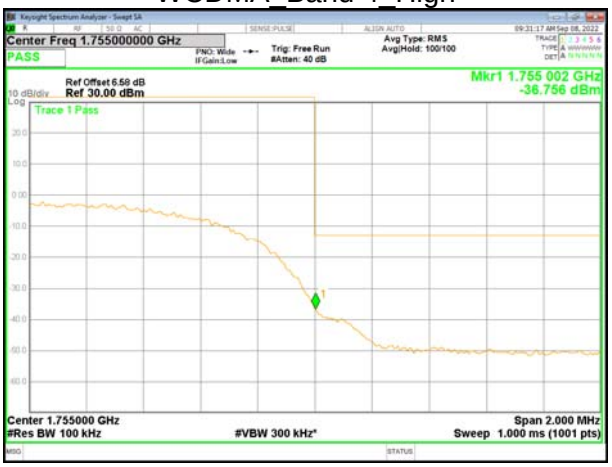


HSUPA_Band 5_High

WCDMA_Band 4_Low

WCDMA_Band 4_High

HSDPA_Band 4_Low



HSDPA_Band 4_High

HSUPA_Band 4_Low

HSUPA_Band 4_Low

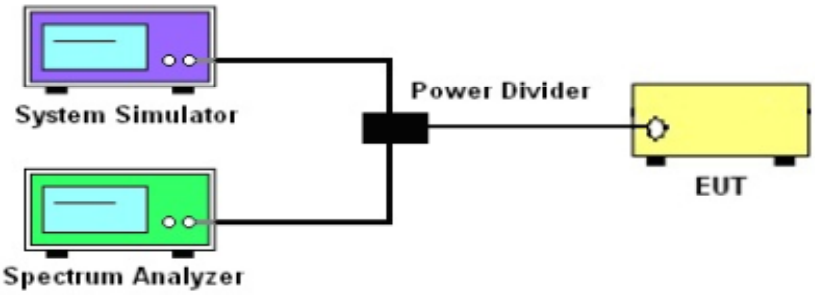
7. CONDUCTED SPURIOUS EMISSION

7.1 DESCRIPTION OF CONDUCTED SPURIOUS EMISSION MEASUREMENT

7.1.1 MEASUREMENT METHOD

The power of any emission outside of the authorized operating frequency ranges must be lower thanthe transmitter power (P) by a factor of at least 43 + 10 log (P) dB.
For Band 7:
The power of any emission outside of the authorized operating frequency ranges must be lower thanthe transmitter power (P) by a factor of at least 55 + 10 log (P) dB.
It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

7.1.2 TEST SETUP



7.1.3 TEST PROCEDURES

1.The testing FCC KDB 971168 D01 v03r01 Section 6.0 and ANSI C63.26 2015 Section 5.7.

2. The EUT was connected to spectrum analyzer and system simulator via a power divider.

3. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
The path loss was compensated to the results for each measurement
4. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
5. The RF fundamental frequency should be excluded against the limit line in the operatingfrquency band.
6.The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
= P(W)- [43 + 10log(P)] (dB) = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
= -13dBm.

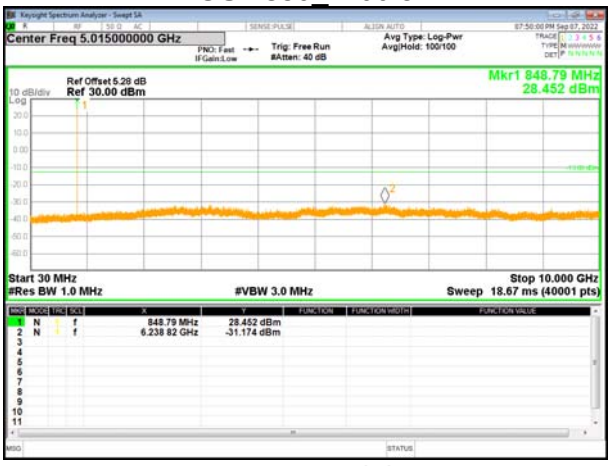
7.1.4 TEST RESULTS

GSM850_Low

GPRS850_Low

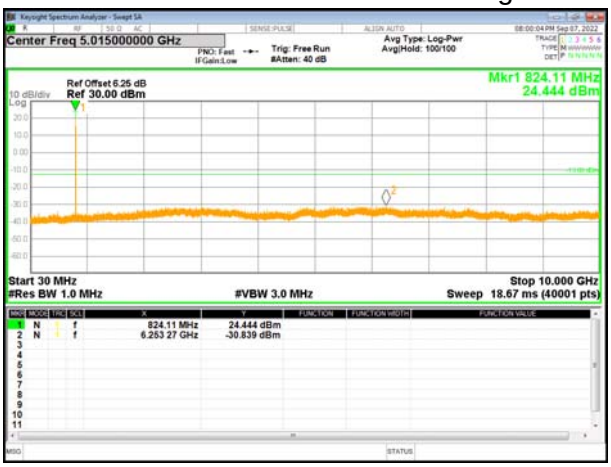
GSM850_Middle

GPRS850_Middle

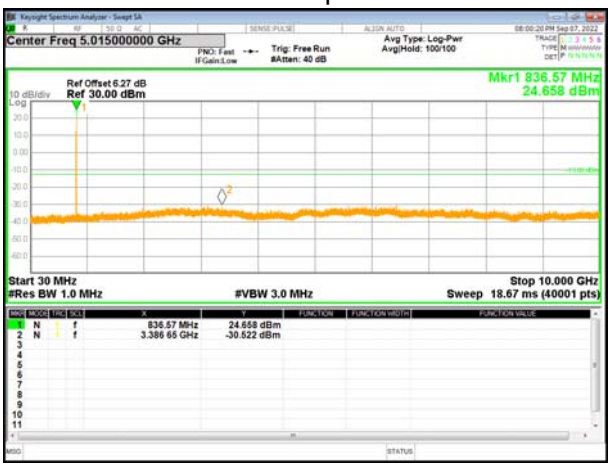


GSM850_High

GPRS850_High

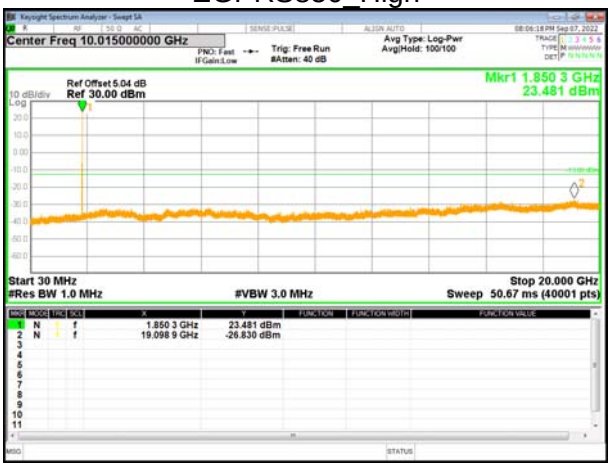


EGPRS850_Low



EGPRS850_Middle

EGPRS850_High

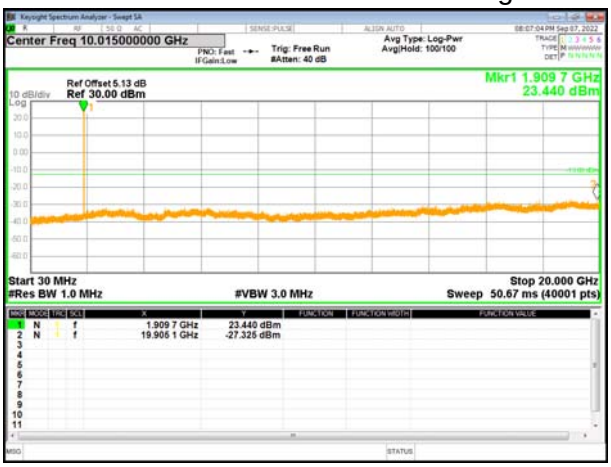


GSM1900_Low

GPRS1900_Low

GSM1900_Middle

GPRS1900_Middle



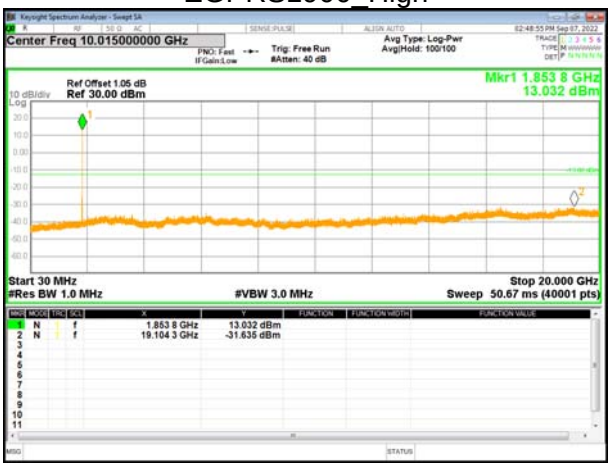
GSM1900_High

GPRS1900_High

EGPRS1900_Low

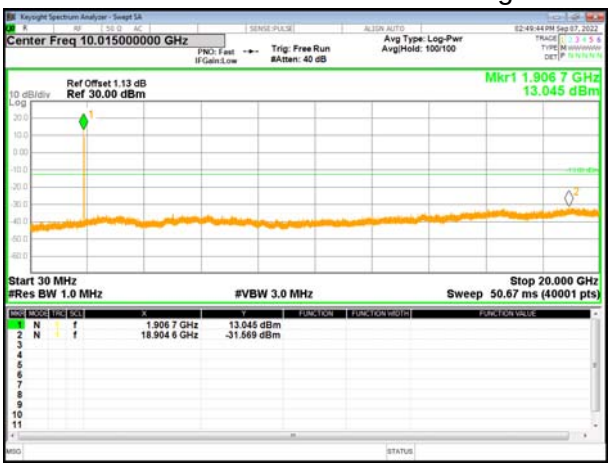
EGPRS1900_Middle

EGPRS1900_High

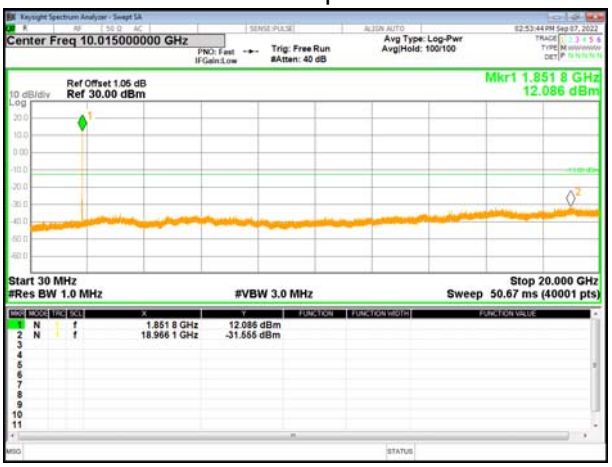


WCDMA_Band 2_Low

WCDMA_Band 2_Middle



WCDMA_Band 2_High

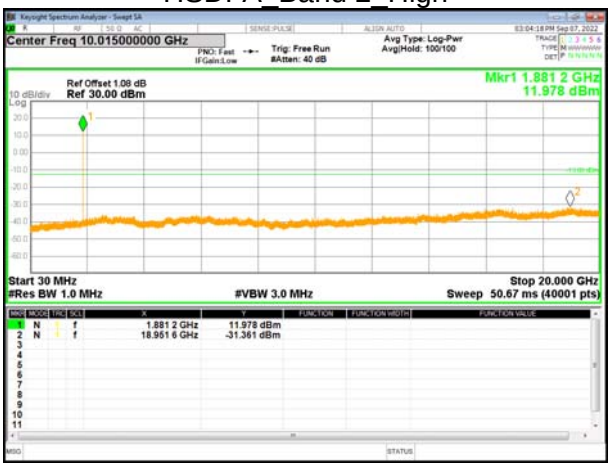


HSDPA_Band 2_Low

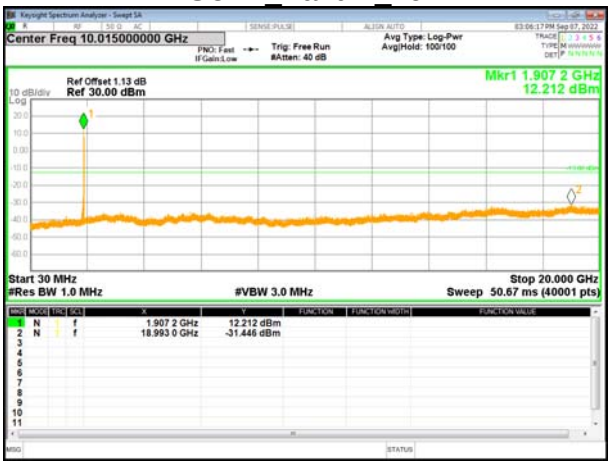
HSDPA_Band 2_Middle

HSDPA_Band 2_High

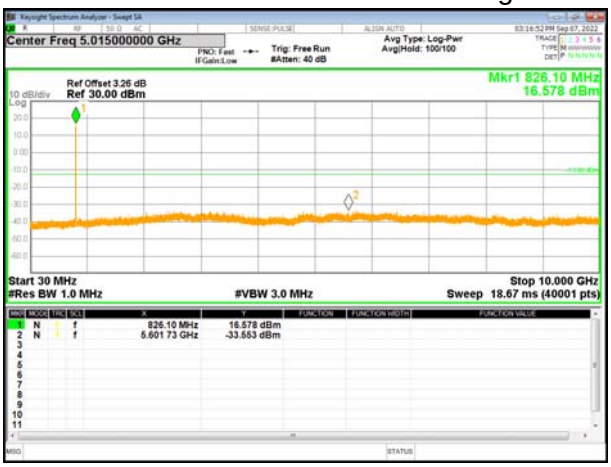
HSUPA_Band 2_Low



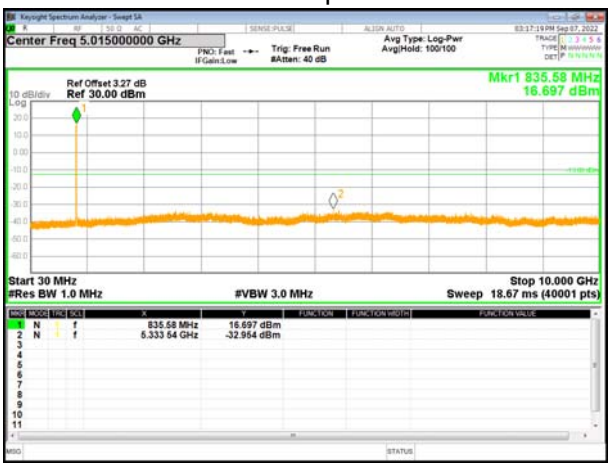
HSUPA_Band 2_Middle



HSUPA_Band 2_High



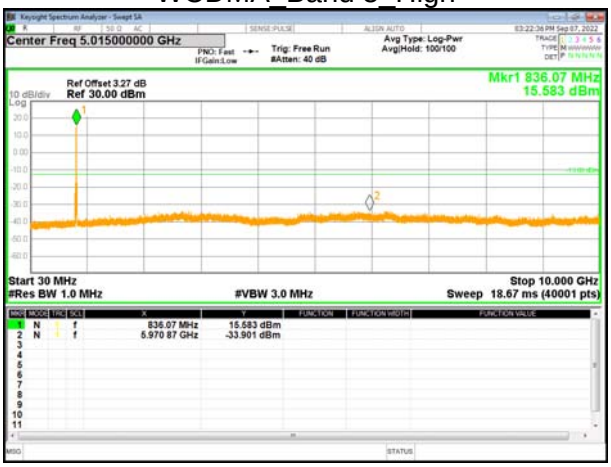
WCDMA_Band 5_Low



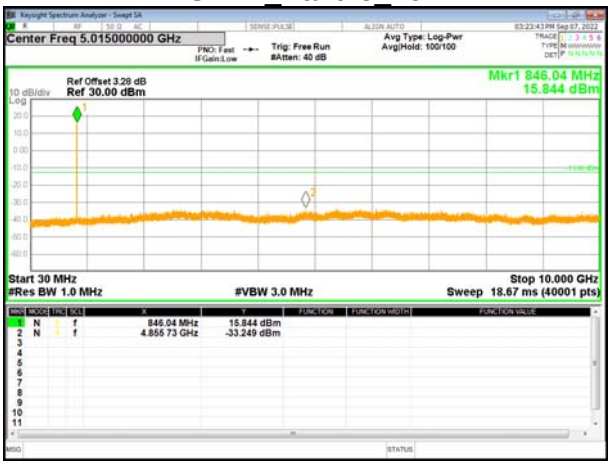
WCDMA_Band 5_Middle

WCDMA_Band 5_High

HSDPA_Band 5_Low

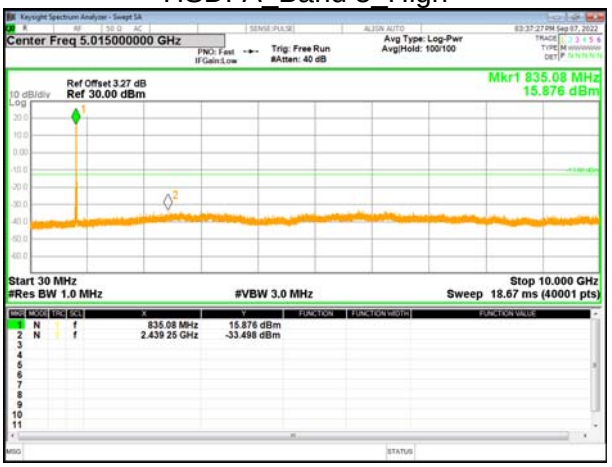


HSDPA_Band 5_Middle

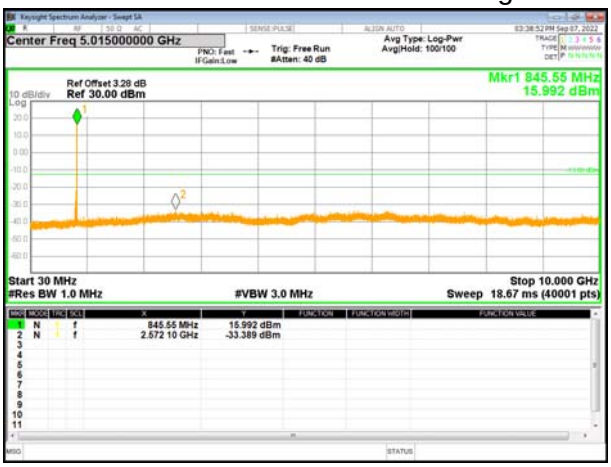


HSDPA_Band 5_High

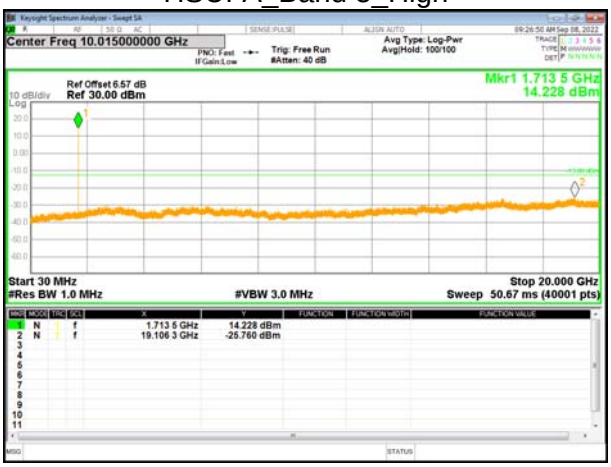
HSUPA_Band 5_Low



HSUPA_Band 5_Middle



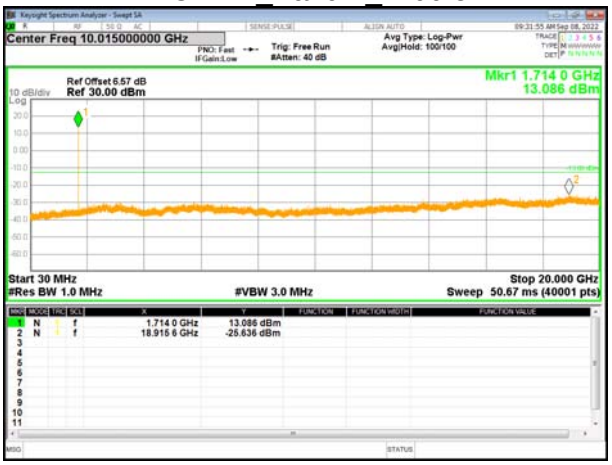
HSUPA_Band 5_High



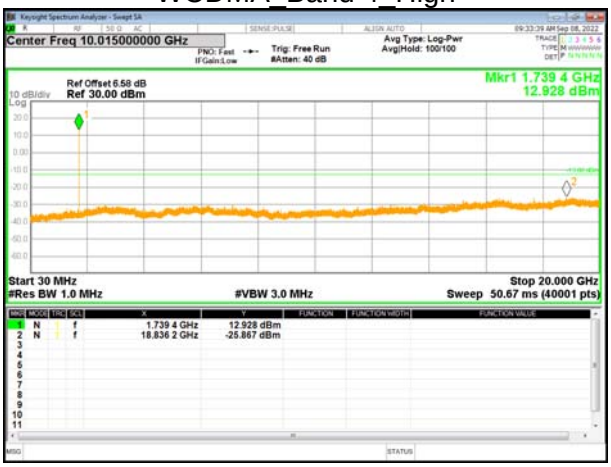
WCDMA_Band 4_Low

WCDMA_Band 4_Middle

WCDMA_Band 4_High

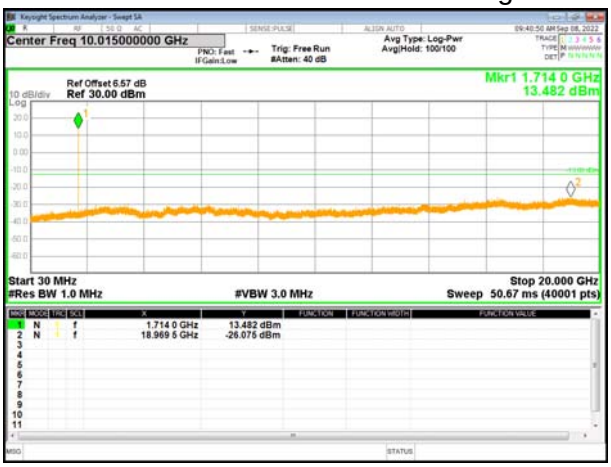


HSDPA_Band 4_Low

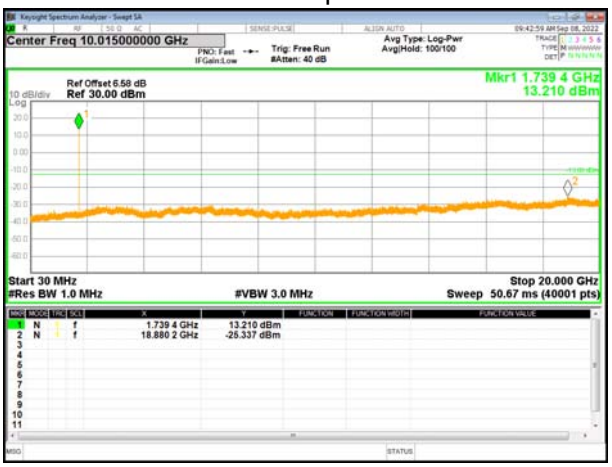


HSDPA_ Band 4_Middle

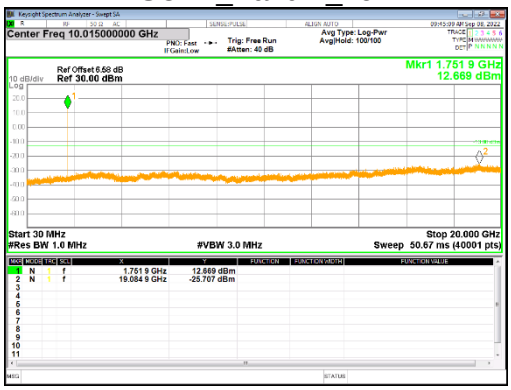
HSDPA_Band 4_High



HSUPA_Band 4_Low



HSUPA_Band 4_Middle



HSUPA_Band 4_High

8. RADIATED SPURIOUS EMISSION

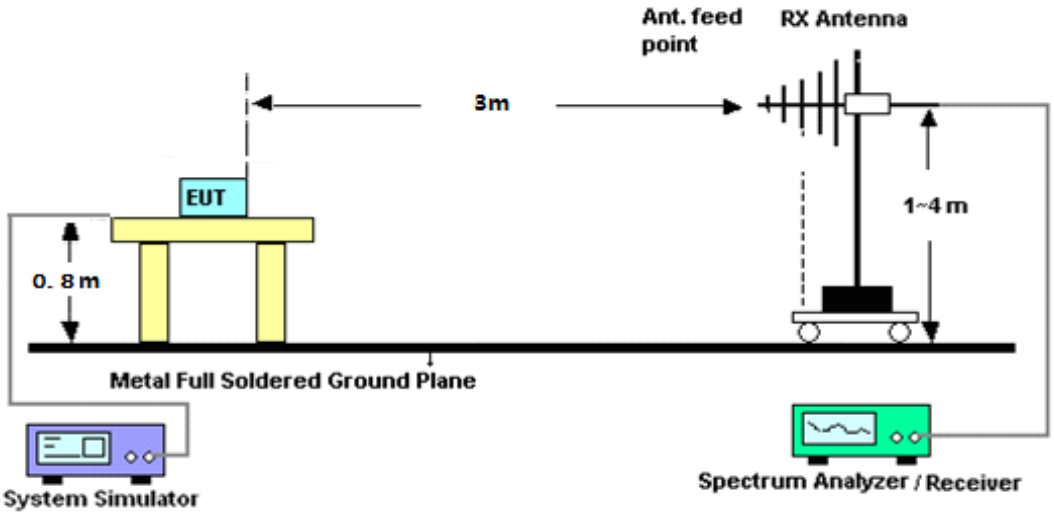
8.1 DESCRIPTION OF RADIATED SPURIOUS EMISSION

8.1.1 MEASUREMENT METHOD

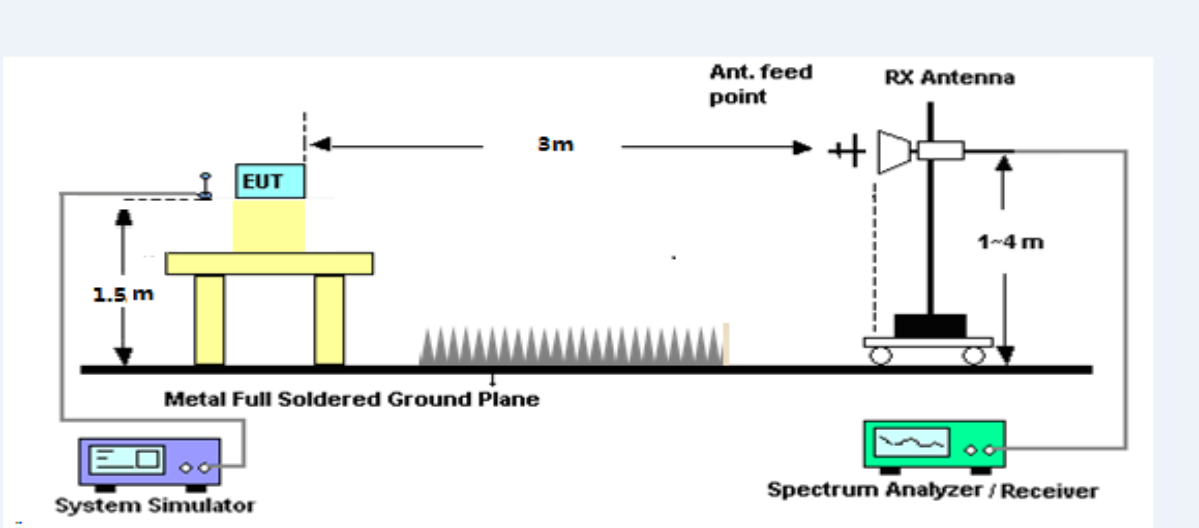
The radiated spurious emission was measured by substitution method according to ANSI C63.26 2015. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.
For Band 7The power of any emission outside of the authorized operating frequency ranges must attenuatedbelow the transmitter power (P) by a factor of at least 55 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

8.1.2 TEST SETUP

The procedure of radiated spurious emissions is as follows:
a) Pre-calibration With pre-calibration method, the Radiated Spurious Emissions(RSE) is calculated as, RSE=Rx (dBuV) +CL (dB) +SA (dB) +Gain (dBi) -107 (dBuV to dBm) The SA is calibrated using following setup.
b) EUT was placed on 1.5 m non-conductive stand at a 3 m test distance from the receive antenna. A receiving antenna was placed on the antenna mast 3 m from the test item for emission measurements. The height of receiving antenna is 0.8m. The test setup refers to figure below. Detected emissions were maximized at each frequency by rotating the test item and adjusting the receiving antenna polarization. The radiated emission measurements of all non-harmonic and harmonics of the transmit frequency through the 10th harmonic measured with peak detector and 1MHz bandwidth.
Radiated emissions measurements were made only at the upper, middle, and lower carrier frequencies It was decided that measurements at these three carrier frequencies would be sufficient to demonstrate compliance with emissions limits because it was seen that all the significant spurs occur well outside the band and no radiation was seen from a carrier in one block of any band into any of the other blocks.
The substitution method is used. Substitution values at each frequency are measured before and saved to the test software. A "reference path loss" is established and the ARpl is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss and the air loss. The measurement results are obtained as described below:
Power=PMea+ARpl
For radiated test from 30MHz to 1GHz



For radiated test from above 1GHz



8.1.3 TEST PROCEDURES

1. The testing FCC KDB 971168 D01 Section 7 and ANSI C63.26 2015 Section 5.5.

2. The EUT was placed on a rotatable wooden table with 1.5 meter above ground.

3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antennatower.

4. The table was rotated 360 degrees to determine the position of the highest spurious emission.

5.The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations

6.Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.

7.A horn antenna was substituted in place of the EUT and was driven by a signal generator.

8.Tune the output power of signal generator to the same emission level with EUT maximumspurious emission.

9.Taking the record of output power at antenna port.

10.Repeat step 7 to step 8 for another polarization.

11.The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)

= P(W)- [43 + 10log(P)] (dB)

= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

= -13dBm

8.1.4 TEST RESULTS

Note:(1) Spurious emissions which are attenuated by more than 20dB below the permissible value for frequeny below 1000MHz.

(2) Above 3.5GHz amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value

(3)Test is divided into three directions, X/Y/Z. X pattern for the worst.

GSM 850: (30-9000)MHz							
The Worst Test Results Channel 128/824.2 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1648.15	-41.34	9.40	4.75	-36.69	-13.00	-23.69	H
2472.45	-40.49	10.60	8.39	-38.28	-13.00	-25.28	H
3296.77	-31.76	12.00	11.79	-31.55	-13.00	-18.55	H
1648.11	-43.33	9.40	4.75	-38.68	-13.00	-25.68	V
2472.42	-44.08	10.60	8.39	-41.87	-13.00	-28.87	V
3296.90	-43.87	12.00	11.79	-43.66	-13.00	-30.66	V
The Worst Test Results Channel 190/836.6 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1673.18	-40.38	9.50	4.76	-35.64	-13.00	-22.64	H
2509.86	-39.71	10.70	8.40	-37.41	-13.00	-24.41	H
3345.98	-31.62	12.20	11.80	-31.22	-13.00	-18.22	H
1672.83	-43.33	9.40	4.75	-38.68	-13.00	-25.68	V
2509.65	-45.20	10.60	8.39	-42.99	-13.00	-29.99	V
3346.44	-43.74	12.20	11.82	-43.36	-13.00	-30.36	V
The Worst Test Results Channel 251/848.8 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1697.18	-41.39	9.60	4.77	-36.56	-13.00	-23.56	H
2546.40	-39.48	10.80	8.50	-37.18	-13.00	-24.18	H
3394.90	-32.06	12.50	11.90	-31.46	-13.00	-18.46	H
1697.60	-43.77	9.60	4.77	-38.94	-13.00	-25.94	V
2546.29	-44.33	10.80	8.50	-42.03	-13.00	-29.03	V
3395.13	-43.92	12.50	11.90	-43.32	-13.00	-30.32	V

GPRS 850: (30-9000)MHz							
The Worst Test Results Channel 128/824.2 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1648.03	-40.14	9.40	4.75	-35.49	-13.00	-22.49	H
2472.28	-40.11	10.60	8.39	-37.90	-13.00	-24.90	H
3296.51	-32.05	12.00	11.79	-31.84	-13.00	-18.84	H
1648.05	-43.38	9.40	4.75	-38.73	-13.00	-25.73	V
2472.52	-45.29	10.60	8.39	-43.08	-13.00	-30.08	V
3296.77	-42.74	12.00	11.79	-42.53	-13.00	-29.53	V
The Worst Test Results Channel 190/836.6 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1672.99	-41.17	9.50	4.76	-36.43	-13.00	-23.43	H
2509.76	-39.32	10.70	8.40	-37.02	-13.00	-24.02	H
3346.27	-31.24	12.20	11.80	-30.84	-13.00	-17.84	H
1672.97	-44.12	9.40	4.75	-39.47	-13.00	-26.47	V
2509.68	-44.95	10.60	8.39	-42.74	-13.00	-29.74	V
3346.18	-43.60	12.20	11.82	-43.22	-13.00	-30.22	V
The Worst Test Results Channel 251/848.8 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1697.59	-40.42	9.60	4.77	-35.59	-13.00	-22.59	H
2546.18	-39.84	10.80	8.50	-37.54	-13.00	-24.54	H
3394.97	-31.25	12.50	11.90	-30.65	-13.00	-17.65	H
1697.34	-43.46	9.60	4.77	-38.63	-13.00	-25.63	V
2546.45	-45.40	10.80	8.50	-43.10	-13.00	-30.10	V
3395.19	-42.83	12.50	11.90	-42.23	-13.00	-29.23	V

EGPRS 850: (30-9000)MHz							
The Worst Test Results Channel 128/824.2 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1648.48	-40.23	9.40	4.75	-35.58	-13.00	-22.58	H
2472.33	-39.59	10.60	8.39	-37.38	-13.00	-24.38	H
3296.46	-31.63	12.00	11.79	-31.42	-13.00	-18.42	H
1648.10	-44.24	9.40	4.75	-39.59	-13.00	-26.59	V
2472.68	-44.49	10.60	8.39	-42.28	-13.00	-29.28	V
3296.70	-43.74	12.00	11.79	-43.53	-13.00	-30.53	V
The Worst Test Results Channel 190/836.6 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1672.92	-40.51	9.50	4.76	-35.77	-13.00	-22.77	H
2509.74	-39.50	10.70	8.40	-37.20	-13.00	-24.20	H
3346.09	-31.19	12.20	11.80	-30.79	-13.00	-17.79	H
1673.04	-43.81	9.40	4.75	-39.16	-13.00	-26.16	V
2509.43	-44.74	10.60	8.39	-42.53	-13.00	-29.53	V
3346.28	-43.64	12.20	11.82	-43.26	-13.00	-30.26	V
The Worst Test Results Channel 251/848.8 MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1697.58	-41.11	9.60	4.77	-36.28	-13.00	-23.28	H
2546.28	-40.31	10.80	8.50	-38.01	-13.00	-25.01	H
3395.06	-31.99	12.50	11.90	-31.39	-13.00	-18.39	H
1697.49	-43.62	9.60	4.77	-38.79	-13.00	-25.79	V
2546.55	-44.63	10.80	8.50	-42.33	-13.00	-29.33	V
3394.86	-43.47	12.50	11.90	-42.87	-13.00	-29.87	V

PCS 1900: (30-20000)MHz							
The Worst Test Results for Channel 512/1850.2MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3700.44	-34.15	12.60	12.93	-34.48	-13.00	-21.48	H
5550.25	-34.17	13.10	17.11	-38.18	-13.00	-25.18	H
7400.67	-32.26	11.50	22.20	-42.96	-13.00	-29.96	H
3700.35	-35.10	12.60	12.93	-35.43	-13.00	-22.43	V
5550.67	-33.79	13.10	17.11	-37.80	-13.00	-24.80	V
7400.60	-32.29	11.50	22.20	-42.99	-13.00	-29.99	V
The Worst Test Results for Channel 661/1880.0MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3760.22	-34.78	12.60	12.93	-35.11	-13.00	-22.11	H
5639.99	-34.56	13.10	17.11	-38.57	-13.00	-25.57	H
7519.88	-33.64	11.50	22.20	-44.34	-13.00	-31.34	H
3760.02	-35.23	12.60	12.93	-35.56	-13.00	-22.56	V
5639.93	-34.17	13.10	17.11	-38.18	-13.00	-25.18	V
7520.17	-33.18	11.50	22.20	-43.88	-13.00	-30.88	V
The Worst Test Results for Channel 810/1909.8MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3819.57	-33.52	12.60	12.93	-33.85	-13.00	-20.85	H
5729.48	-35.30	13.10	17.11	-39.31	-13.00	-26.31	H
7638.83	-32.97	11.50	22.20	-43.67	-13.00	-30.67	H
3819.35	-35.56	12.60	12.93	-35.89	-13.00	-22.89	V
5729.52	-35.09	13.10	17.11	-39.10	-13.00	-26.10	V
7639.13	-32.25	11.50	22.20	-42.95	-13.00	-29.95	V

GPRS1900: (30-20000)MHz							
The Worst Test Results for Channel 512/1850.2MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3700.40	-33.67	12.60	12.93	-34.00	-13.00	-21.00	H
5550.23	-35.34	13.10	17.11	-39.35	-13.00	-26.35	H
7400.77	-32.48	11.50	22.20	-43.18	-13.00	-30.18	H
3700.36	-35.29	12.60	12.93	-35.62	-13.00	-22.62	V
5550.44	-35.17	13.10	17.11	-39.18	-13.00	-26.18	V
7400.68	-31.82	11.50	22.20	-42.52	-13.00	-29.52	V
The Worst Test Results for Channel 661/1880.0MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3759.79	-33.76	12.60	12.93	-34.09	-13.00	-21.09	H
5640.22	-35.39	13.10	17.11	-39.40	-13.00	-26.40	H
7519.89	-32.29	11.50	22.20	-42.99	-13.00	-29.99	H
3760.08	-35.45	12.60	12.93	-35.78	-13.00	-22.78	V
5640.22	-34.72	13.10	17.11	-38.73	-13.00	-25.73	V
7519.88	-32.30	11.50	22.20	-43.00	-13.00	-30.00	V
The Worst Test Results for Channel 810/1909.8MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3819.30	-34.16	12.60	12.93	-34.49	-13.00	-21.49	H
5729.48	-34.27	13.10	17.11	-38.28	-13.00	-25.28	H
7639.32	-32.29	11.50	22.20	-42.99	-13.00	-29.99	H
3819.61	-35.08	12.60	12.93	-35.41	-13.00	-22.41	V
5729.35	-34.28	13.10	17.11	-38.29	-13.00	-25.29	V
7639.22	-32.98	11.50	22.20	-43.68	-13.00	-30.68	V

EGPRS 1900: (30-20000)MHz							
The Worst Test Results for Channel 512/1850.2MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3700.25	-33.83	12.60	12.93	-34.16	-13.00	-21.16	H
5550.51	-34.16	13.10	17.11	-38.17	-13.00	-25.17	H
7400.87	-32.39	11.50	22.20	-43.09	-13.00	-30.09	H
3700.51	-34.95	12.60	12.93	-35.28	-13.00	-22.28	V
5550.57	-34.60	13.10	17.11	-38.61	-13.00	-25.61	V
7400.71	-32.22	11.50	22.20	-42.92	-13.00	-29.92	V
The Worst Test Results for Channel 661/1880.0MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3760.05	-34.88	12.60	12.93	-35.21	-13.00	-22.21	H
5640.28	-34.73	13.10	17.11	-38.74	-13.00	-25.74	H
7520.09	-33.09	11.50	22.20	-43.79	-13.00	-30.79	H
3759.90	-36.02	12.60	12.93	-36.35	-13.00	-23.35	V
5640.00	-34.50	13.10	17.11	-38.51	-13.00	-25.51	V
7520.14	-32.40	11.50	22.20	-43.10	-13.00	-30.10	V
The Worst Test Results for Channel 810/1909.8MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3819.53	-34.57	12.60	12.93	-34.90	-13.00	-21.90	H
5729.20	-34.62	13.10	17.11	-38.63	-13.00	-25.63	H
7638.89	-32.32	11.50	22.20	-43.02	-13.00	-30.02	H
3819.33	-35.55	12.60	12.93	-35.88	-13.00	-22.88	V
5729.05	-34.46	13.10	17.11	-38.47	-13.00	-25.47	V
7639.38	-31.96	11.50	22.20	-42.66	-13.00	-29.66	V

WCDMA Band 5: (30-9000)MHz							
The wosttestresults channel 4132/826.4MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1652.11	-41.4	9.40	4.75	-36.75	-13.00	-23.75	H
2479.61	-39.33	10.60	8.39	-37.12	-13.00	-24.12	H
3305.44	-31.5	12.00	11.79	**-31.29**	-13.00	-18.29	H
1652.3	-43.63	9.40	4.75	-38.98	-13.00	-25.98	V
2479.56	-44.44	10.60	8.39	-42.23	-13.00	-29.23	V
3305.63	-43.28	12.00	11.79	-43.07	-13.00	-30.07	V
The Worst Test Results Channel 4183/836.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1672.93	-40.91	9.40	4.75	-36.26	-13.00	-23.26	H
2509.5	-39.31	10.60	8.39	-37.10	-13.00	-24.10	H
3346.13	-32.25	12.00	11.79	**-32.04**	-13.00	-19.04	H
1673.03	-44.5	9.40	4.75	-39.85	-13.00	-26.85	V
2509.88	-44.41	10.60	8.39	-42.20	-13.00	-29.20	V
3346.24	-43.74	12.00	11.79	-43.53	-13.00	-30.53	V
The Worst Test Results Channel 4233/846.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1693.60	-40.83	9.40	4.75	-36.18	-13.00	-23.18	H
2539.10	-39.67	10.60	8.39	-37.46	-13.00	-24.46	H
3385.91	-31.33	12.00	11.79	**-31.12**	-13.00	-18.12	H
1693.32	-43.88	9.40	4.75	-39.23	-13.00	-26.23	V
2539.14	-44.83	10.60	8.39	-42.62	-13.00	-29.62	V
3386.26	-42.93	12.00	11.79	-42.72	-13.00	-29.72	V

HSUPA Band 5: (30-9000)MHz							
The wosttestresults channel 4132/826.4MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1652.40	-40.25	9.40	4.75	-35.60	-13.00	-22.60	H
2479.46	-39.64	10.60	8.39	-37.43	-13.00	-24.43	H
3305.91	-31.60	12.00	11.79	**-31.39**	-13.00	-18.39	H
1652.36	-43.45	9.40	4.75	-38.80	-13.00	-25.80	V
2479.63	-44.87	10.60	8.39	-42.66	-13.00	-29.66	V
3305.91	-42.77	12.00	11.79	-42.56	-13.00	-29.56	V
The Worst Test Results Channel 4183/836.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1673.17	-41.19	9.40	4.75	-36.54	-13.00	-23.54	H
2509.85	-39.71	10.60	8.39	-37.50	-13.00	-24.50	H
3345.99	-31.68	12.00	11.79	**-31.47**	-13.00	-18.47	H
1672.97	-43.95	9.40	4.75	-39.30	-13.00	-26.30	V
2509.70	-45.07	10.60	8.39	-42.86	-13.00	-29.86	V
3346.04	-43.71	12.00	11.79	-43.50	-13.00	-30.50	V
The Worst Test Results Channel 4233/846.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1693.56	-40.82	9.40	4.75	-36.17	-13.00	-23.17	H
2539.24	-39.98	10.60	8.39	-37.77	-13.00	-24.77	H
3386.24	-32.19	12.00	11.79	**-31.98**	-13.00	-18.98	H
1693.46	-44.28	9.40	4.75	-39.63	-13.00	-26.63	V
2539.51	-44.89	10.60	8.39	-42.68	-13.00	-29.68	V
3386.13	-42.53	12.00	11.79	-42.32	-13.00	-29.32	V

HSDPA Band 5: (30-9000)MHz							
The wosttestresults channel 4132/826.4MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1652.48	-41.22	9.40	4.75	-36.57	-13.00	-23.57	H
2479.35	-39.80	10.60	8.39	-37.59	-13.00	-24.59	H
3305.63	-30.97	12.00	11.79	**-30.76**	-13.00	-17.76	H
1652.17	-44.23	9.40	4.75	-39.58	-13.00	-26.58	V
2479.29	-44.26	10.60	8.39	-42.05	-13.00	-29.05	V
3305.83	-42.61	12.00	11.79	-42.40	-13.00	-29.40	V
The Worst Test Results Channel 4183/836.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1673.12	-41.46	9.40	4.75	-36.81	-13.00	-23.81	H
2509.52	-39.31	10.60	8.39	-37.10	-13.00	-24.10	H
3346.05	-32.23	12.00	11.79	-32.02	-13.00	-19.02	H
1673.22	-44.62	9.40	4.75	-39.97	-13.00	-26.97	V
2509.75	-44.27	10.60	8.39	-42.06	-13.00	-29.06	V
3345.99	-42.5	12.00	11.79	-42.29	-13.00	-29.29	V
The Worst Test Results Channel 4233/846.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
1693.52	-41.44	9.40	4.75	-36.79	-13.00	-23.79	H
2539.15	-40.18	10.60	8.39	-37.97	-13.00	-24.97	H
3386.23	-32.30	12.00	11.79	-32.09	-13.00	-19.09	H
1693.64	-43.38	9.40	4.75	-38.73	-13.00	-25.73	V
2539.33	-44.40	10.60	8.39	-42.19	-13.00	-29.19	V
3386.18	-42.75	12.00	11.79	-42.54	-13.00	-29.54	V

WCDMA Band 2: (30-20000)MHz							
The Worst Test Results for Channel 9262/1852.4MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3704.44	-33.55	12.60	12.93	**-33.88**	-13.00	-20.88	H
5557.38	-34.67	13.10	17.11	-38.68	-13.00	-25.68	H
7409.79	-33.00	11.50	22.20	-43.70	-13.00	-30.70	H
3704.29	-35.69	12.60	12.93	-36.02	-13.00	-23.02	V
5557.40	-35.09	13.10	17.11	-39.10	-13.00	-26.10	V
7409.67	-32.67	11.50	22.20	-43.37	-13.00	-30.37	V
The Worst Test Results for Channel 9400/1880MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3704.44	-33.55	12.60	12.93	-34.61	-13.00	-21.61	H
5557.38	-34.67	13.10	17.11	-39.25	-13.00	-26.25	H
7409.79	-33.00	11.50	22.20	-43.68	-13.00	-30.68	H
3704.29	-35.69	12.60	12.93	-35.75	-13.00	-22.75	V
5557.40	-35.09	13.10	17.11	-38.00	-13.00	-25.00	V
7409.67	-32.67	11.50	22.20	-43.82	-13.00	-30.82	V
The Worst Test Results for Channel 9538/1907.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3815.71	-34.55	12.60	12.93	-34.88	-13.00	-21.88	H
5722.21	-34.48	13.10	17.11	-38.49	-13.00	-25.49	H
7630.00	-32.29	11.50	22.20	-42.99	-13.00	-29.99	H
3815.72	-35.84	12.60	12.93	-36.17	-13.00	-23.17	V
5722.22	-34.47	13.10	17.11	-38.48	-13.00	-25.48	V
7630.21	-32.28	11.50	22.20	-42.98	-13.00	-29.98	V

HSUPA Band 2: (30-20000)MHz							
The Worst Test Results for Channel 9262/1852.4MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3704.32	-34.57	12.60	12.93	-34.90	-13.00	-21.90	H
5557.33	-35.41	13.10	17.11	-39.42	-13.00	-26.42	H
7409.52	-32.29	11.50	22.20	-42.99	-13.00	-29.99	H
3704.16	-35.96	12.60	12.93	-36.29	-13.00	-23.29	V
5557.23	-34.18	13.10	17.11	-38.19	-13.00	-25.19	V
7409.92	-33.02	11.50	22.20	-43.72	-13.00	-30.72	V
The Worst Test Results for Channel 9400/1880MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3760.09	-34.22	12.60	12.93	-34.55	-13.00	-21.55	H
5640.14	-34.73	13.10	17.11	-38.74	-13.00	-25.74	H
7519.91	-32.79	11.50	22.20	-43.49	-13.00	-30.49	H
3759.94	-34.79	12.60	12.93	-35.12	-13.00	-22.12	V
5640.27	-33.91	13.10	17.11	-37.92	-13.00	-24.92	V
7520.11	-32.61	11.50	22.20	-43.31	-13.00	-30.31	V
The Worst Test Results for Channel 9538/1907.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3815.54	-34.42	12.60	12.93	-34.75	-13.00	-21.75	H
5722.38	-34.08	13.10	17.11	-38.09	-13.00	-25.09	H
7629.96	-33.50	11.50	22.20	-44.20	-13.00	-31.20	H
3815.38	-35.27	12.60	12.93	-35.60	-13.00	-22.60	V
5722.14	-35.08	13.10	17.11	-39.09	-13.00	-26.09	V
7630.02	-32.03	11.50	22.20	-42.73	-13.00	-29.73	V

HSDPA Band 2: (30-20000)MHz							
The Worst Test Results for Channel 9262/1852.4MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3704.35	-33.45	12.60	12.93	-33.78	-13.00	-20.78	H
5557.29	-34.36	13.10	17.11	-38.37	-13.00	-25.37	H
7409.48	-32.60	11.50	22.20	-43.30	-13.00	-30.30	H
3704.49	-35.72	12.60	12.93	-36.05	-13.00	-23.05	V
5557.42	-34.02	13.10	17.11	-38.03	-13.00	-25.03	V
7409.90	-32.92	11.50	22.20	-43.62	-13.00	-30.62	V
The Worst Test Results for Channel 9400/1880MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3760.21	-34.49	12.60	12.93	-34.82	-13.00	-21.82	H
5639.87	-34.21	13.10	17.11	-38.22	-13.00	-25.22	H
7520.15	-32.33	11.50	22.20	-43.03	-13.00	-30.03	H
3759.99	-35.49	12.60	12.93	-35.82	-13.00	-22.82	V
5639.93	-34.28	13.10	17.11	-38.29	-13.00	-25.29	V
7519.91	-32.84	11.50	22.20	-43.54	-13.00	-30.54	V
The Worst Test Results for Channel 9538/1907.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3815.26	-34.64	12.60	12.93	-34.97	-13.00	-21.97	H
5722.47	-34.17	13.10	17.11	-38.18	-13.00	-25.18	H
7630.01	-33.53	11.50	22.20	-44.23	-13.00	-31.23	H
3815.24	-34.63	12.60	12.93	-34.96	-13.00	-21.96	V
5722.24	-34.04	13.10	17.11	-38.05	-13.00	-25.05	V
7629.85	-32.46	11.50	22.20	-43.16	-13.00	-30.16	V

WCDMA Band 4: (30-20000)MHz							
The Worst Test Results for Channel 1312/1712.4MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3704.36	-34.13	12.60	12.93	-34.46	-13.00	-21.46	H
5557.29	-34.85	13.10	17.11	-38.86	-13.00	-25.86	H
7409.83	-33.40	11.50	22.20	-44.10	-13.00	-31.10	H
3704.07	-35.40	12.60	12.93	-35.73	-13.00	-22.73	V
5557.18	-35.11	13.10	17.11	-39.12	-13.00	-26.12	V
7409.68	-32.99	11.50	22.20	-43.69	-13.00	-30.69	V
The Worst Test Results for Channel 1450/1740MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3759.98	-34.28	12.60	12.93	-34.61	-13.00	-21.61	H
5639.90	-35.24	13.10	17.11	-39.25	-13.00	-26.25	H
7519.98	-32.98	11.50	22.20	-43.68	-13.00	-30.68	H
3760.23	-35.42	12.60	12.93	-35.75	-13.00	-22.75	V
5639.97	-33.99	13.10	17.11	-38.00	-13.00	-25.00	V
7519.87	-33.12	11.50	22.20	-43.82	-13.00	-30.82	V
The Worst Test Results for Channel 1513/1752.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3815.71	-34.55	12.60	12.93	-34.88	-13.00	-21.88	H
5722.21	-34.48	13.10	17.11	-38.49	-13.00	-25.49	H
7630.00	-32.29	11.50	22.20	-42.99	-13.00	-29.99	H
3815.72	-35.84	12.60	12.93	-36.17	-13.00	-23.17	V
5722.22	-34.47	13.10	17.11	-38.48	-13.00	-25.48	V
7630.21	-32.28	11.50	22.20	-42.98	-13.00	-29.98	V

HSUPA BAND 4: (30-20000)MHZ

THE WORST TEST RESULTS FOR CHANNEL 1312/1712.4MHZ

Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3704.32	-34.57	12.60	12.93	-34.90	-13.00	-21.90	H
5557.33	-35.41	13.10	17.11	-39.42	-13.00	-26.42	H
7409.52	-32.29	11.50	22.20	-42.99	-13.00	-29.99	H
3704.16	-35.96	12.60	12.93	-36.29	-13.00	-23.29	V
5557.23	-34.18	13.10	17.11	-38.19	-13.00	-25.19	V
7409.92	-33.02	11.50	22.20	-43.72	-13.00	-30.72	V
The Worst Test Results for Channel 1450/1740MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3760.09	-34.22	12.60	12.93	-34.55	-13.00	-21.55	H
5640.14	-34.73	13.10	17.11	-38.74	-13.00	-25.74	H
7519.91	-32.79	11.50	22.20	-43.49	-13.00	-30.49	H
3759.94	-34.79	12.60	12.93	-35.12	-13.00	-22.12	V
5640.27	-33.91	13.10	17.11	-37.92	-13.00	-24.92	V
7520.11	-32.61	11.50	22.20	-43.31	-13.00	-30.31	V
The Worst Test Results for Channel 1513/1752.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3815.54	-34.42	12.60	12.93	-34.75	-13.00	-21.75	H
5722.38	-34.08	13.10	17.11	-38.09	-13.00	-25.09	H
7629.96	-33.50	11.50	22.20	-44.20	-13.00	-31.20	H
3815.38	-35.27	12.60	12.93	-35.60	-13.00	-22.60	V
5722.14	-35.08	13.10	17.11	-39.09	-13.00	-26.09	V
7630.02	-32.03	11.50	22.20	-42.73	-13.00	-29.73	V

HSDPA BAND 4: (30-20000)MHZ

THE WORST TEST RESULTS FOR CHANNEL 1312/1712.4MHZ

Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3704.35	-33.45	12.60	12.93	-33.78	-13.00	-20.78	H
5557.29	-34.36	13.10	17.11	-38.37	-13.00	-25.37	H
7409.48	-32.60	11.50	22.20	-43.30	-13.00	-30.30	H
3704.49	-35.72	12.60	12.93	-36.05	-13.00	-23.05	V
5557.42	-34.02	13.10	17.11	-38.03	-13.00	-25.03	V
7409.90	-32.92	11.50	22.20	-43.62	-13.00	-30.62	V
The Worst Test Results for Channel 1450/1740MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3760.21	-34.49	12.60	12.93	-34.82	-13.00	-21.82	H
5639.87	-34.21	13.10	17.11	-38.22	-13.00	-25.22	H
7520.15	-32.33	11.50	22.20	-43.03	-13.00	-30.03	H
3759.99	-35.49	12.60	12.93	-35.82	-13.00	-22.82	V
5639.93	-34.28	13.10	17.11	-38.29	-13.00	-25.29	V
7519.91	-32.84	11.50	22.20	-43.54	-13.00	-30.54	V
The Worst Test Results for Channel 1513/1752.6MHz							
Frequency(MHz)	S G.Lev (dBm)	Ant(dBi)	Loss	PMea (dBm)	Limit （dBm）	Margin (dBm)	Polarity
3815.26	-34.64	12.60	12.93	-34.97	-13.00	-21.97	H
5722.47	-34.17	13.10	17.11	-38.18	-13.00	-25.18	H
7630.01	-33.53	11.50	22.20	-44.23	-13.00	-31.23	H
3815.24	-34.63	12.60	12.93	-34.96	-13.00	-21.96	V
5722.24	-34.04	13.10	17.11	-38.05	-13.00	-25.05	V
7629.85	-32.46	11.50	22.20	-43.16	-13.00	-30.16	V

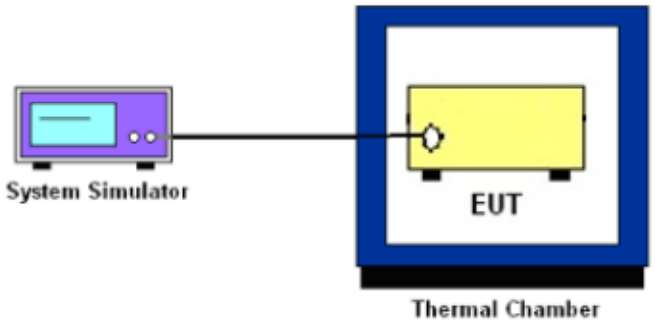
9. FREQUENCY STABILITY

9.1 DESCRIPTION OF FREQUENCYSTABILITY MEASUREMENT

9.1.1 MEASUREMENT METHOD

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequencyblock. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) ofthe center frequency.

9.1.2 TEST SETUP



9.1.3 TEST PROCEDURES FOR TEMPERATURE VARIATION

1. The EUT was set up in the thermal chamber and connected with the system simulator.

2.With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within oneminute.
3.With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

9.1.4 TEST PROCEDURES FOR VOLTAGE VARIATION

1.The testing follows FCC KDB 971168 D01v01r03 Section 9.

2. The EUT was placed in a temperature chamber at 25±5° C and connected with the systemsimlator.

3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal valuemeasured at the input to the EUT.

4. The variation in frequency was measured for the worst case.

9.1.5 TEST RESULTS

Normal Voltage = 3.7V; Battery End Point (BEP) = 3.4V;Maximum Voltage =4.2V

GSM 850 /836.6MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	33.79	0.040	2.5ppm	PASS
40		15.41	0.018		
30		28.84	0.034		
20		14.48	0.017		
10		26.57	0.032		
0		16.23	0.019		
-10		13.67	0.016		
-20		18.80	0.022		
-30		18.28	0.022		
20	Maximum Voltage	30.57	0.037		
20	BEP	33.48	0.040		

GPRS 850 /836.6MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	15.20	0.018	2.5ppm	PASS
40		21.54	0.026		
30		34.31	0.041		
20		31.37	0.037		
10		29.17	0.035		
0		32.36	0.039		
-10		31.69	0.038		
-20		19.16	0.023		
-30		29.47	0.035		
20	Maximum Voltage	31.86	0.038		
20	BEP	29.56	0.035		

EGPRS 850 /836.6MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	24.52	0.029	2.5ppm	PASS
40		30.41	0.036		
30		27.81	0.033		
20		34.19	0.041		
10		29.12	0.035		
0		27.75	0.033		
-10		23.52	0.028		
-20		24.00	0.029		
-30		33.56	0.040		
20	Maximum Voltage	16.83	0.020		
20	BEP	20.84	0.025		

GSM 1900 / 1880MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	25.33	0.013	Within Authorized Band	PASS
40		23.57	0.013		
30		16.35	0.009		
20		28.53	0.015		
10		33.22	0.018		
0		12.28	0.007		
-10		35.37	0.019		
-20		32.08	0.017		
-30		14.30	0.008		
20	Maximum Voltage	24.51	0.013		
20	BEP	26.48	0.014		

GPRS 1900 / 1880MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	22.26	0.012	Within Authorized Band	PASS
40		25.03	0.013		
30		28.84	0.015		
20		33.13	0.018		
10		14.15	0.008		
0		15.68	0.008		
-10		19.53	0.010		
-20		33.09	0.018		
-30		20.29	0.011		
20	Maximum Voltage	29.91	0.016		
20	BEP	23.89	0.013		

EGPRS 1900 / 1880MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	26.27	0.014	Within Authorized Band	PASS
40		33.57	0.018		
30		29.83	0.016		
20		17.87	0.010		
10		22.98	0.012		
0		23.38	0.012		
-10		14	0.007		
-20		14.06	0.007		
-30		16	0.009		
20	Maximum Voltage	24.99	0.013		
20	BEP	17.72	0.009		

UMTS Band 2 /1880MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	25.33	0.013	Within Authorized Band	PASS
40		27.69	0.015		
30		21.50	0.011		
20		32.99	0.018		
10		22.81	0.012		
0		28.84	0.015		
-10		31.95	0.017		
-20		33.52	0.018		
-30		25.86	0.014		
20	Maximum Voltage	22.17	0.012		
20	BEP	11.62	0.006		

HSDPA Band 2 /1880MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	21.41	0.011	Within Authorized Band	PASS
40		35.09	0.019		
30		17.15	0.009		
20		35.16	0.019		
10		33	0.018		
0		12.89	0.007		
-10		30.2	0.016		
-20		22.3	0.012		
-30		29.89	0.016		
20	Maximum Voltage	20.37	0.011		
20	BEP	27.07	0.014		

HSUPA Band 2 /1880MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	21.21	0.011	Within Authorized Band	PASS
40		12.45	0.007		
30		32.94	0.018		
20		31.57	0.017		
10		19.84	0.011		
0		11.77	0.006		
-10		19.23	0.010		
-20		25.34	0.013		
-30		25.25	0.013		
20	Maximum Voltage	27.62	0.015		
20	BEP	22.05	0.012		

UMTS Band 5 / 836.6MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	16.04	0.019	2.5ppm	PASS
40		25.15	0.030		
30		27.63	0.033		
20		12.16	0.015		
10		36.18	0.043		
0		17.22	0.021		
-10		32.47	0.039		
-20		27.49	0.033		
-30		13.42	0.016		
20	Maximum Voltage	32.02	0.038		
20	BEP	20.79	0.025		

HSDPA Band 5 / 836.6MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev.	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	30.5	0.036	2.5ppm	PASS
40		31.1	0.037		
30		26.86	0.032		
20		29.32	0.035		
10		31.2	0.037		
0		13	0.016		
-10		11.53	0.014		
-20		19.57	0.023		
-30		19.99	0.024		
20	Maximum Voltage	35.98	0.043		
20	BEP	18.27	0.022		

HSUPA Band 5 / 836.6MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	30.57	0.037	2.5ppm	PASS
40		26.56	0.032		
30		20.17	0.024		
20		35.29	0.042		
10		18.07	0.022		
0		17.8	0.021		
-10		13.02	0.016		
-20		12.6	0.015		
-30		26.58	0.032		
20	Maximum Voltage	20.21	0.024		
20	BEP	36.14	0.043		

UMTS Band 4 / 1740MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	13	0.007	2.5ppm	PASS
40		17.55	0.009		
30		16.59	0.009		
20		21.17	0.011		
10		15.89	0.008		
0		22.56	0.012		
-10		35.14	0.019		
-20		23.57	0.013		
-30		23.77	0.013		
20	Maximum Voltage	25.97	0.014		
20	BEP	21.59	0.011		

HSDPA Band 4 / 1740MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	33.81	0.018	2.5ppm	PASS
40		13.03	0.007		
30		12.32	0.007		
20		24.92	0.013		
10		28.78	0.015		
0		28.48	0.015		
-10		17.06	0.009		
-20		18.03	0.010		
-30		14.2	0.008		
20	Maximum Voltage	18.69	0.010		
20	BEP	31.2	0.017		

UMTS Band 4 / 1740MHz					
Temperature (°C)	Voltage (Volt)	Freq. Dev. (Hz)	Freq. Dev. (ppm)	Limit	Result
50	Normal Voltage	12.74	0.007	2.5ppm	PASS
40		29.27	0.016		
30		35.11	0.019		
20		13.84	0.007		
10		25.62	0.014		
0		13.14	0.007		
-10		32.89	0.017		
-20		23.01	0.012		
-30		13.97	0.007		
20	Maximum Voltage	19.7	0.010		
20	BEP	34.41	0.018		

1. The frequency fundamental emissions stay within the authorized frequency block based on thefrequency deviation measured is small.

APPENDIX ——PHOTOS OF TEST SETUP

SPURIOUS EMISSION TEST SETUP (BELOW 1GHZ)

SPURIOUS EMISSION TEST SETUP (ABOVE 1GHZ)

End of report